

**EMERGENCY FUND PROVISION AMONG YOUNG
STUDENT ADULTS IN MALAYSIA: A BEHAVIOURAL
PERSPECTIVE**

NUR SHUHADA KAMARUDIN

PhD Thesis

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PERSPECTIVE**

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ABSTRACT

Financial behaviour is complex and difficult to measure. Existing literature on the emergency fund remains lacking in terms of its theoretical testing and modelling, not to mention its accurate definition of emergency fund behaviour itself. Prior studies also suffer from providing sufficient country-contextual evidence on emergency fund behaviour, notably in the instance of Malaysia. Compounding this, the question of how young student adults allocate their emergency fund has yet to be adequately explored by existing studies, primarily due to data limitations. The issues of financial behaviour, financial problems and financial stresses among young adults are still being addressed by many studies. These tend to argue that young adults have less ability to allocate or achieve the recommended adequate level of emergency fund holding. It is these gaps that this thesis will address.

This research uses modified theory of planned behaviour as a research conceptual framework to investigate and understand the emergency fund behaviour among young student adults in Malaysia. The data were collected using online questionnaires and survey interviews. The emergency fund behaviour measurement and Emergency Fund Formation Behaviour (EFFB) models were developed. The Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) were adopted as data analysis tools for this research. The definition of emergency fund behaviour was positioned in relation to two main financial behaviours: saving and investment. The results from the modelling revealed that attitude and propensity to plan were found to significantly contribute to emergency fund formation intentions and behaviour. The subjective norms and perceived behaviour controls were found not to be significant to fund formation intentions and behaviour.

The emergency event from young student adults' perspective was explored and contributes to additional current literature. This research also found that not all young student adults achieved the total three months expenses recommended adequacy level of emergency fund holding. Previous experience of emergency events was found to be the factor that prompted them to achieve the recommended adequacy level. Their intention was to continue to borrow from informal channels, such as family and friends, if they lacked emergency funds in future. Other factors, such as financial aid, did not necessarily determine their ability to achieve the adequacy level.

This research also found that a significant proportion of young student adults chose to use savings accounts and current accounts as their emergency fund. Some also used their student loan (PTPTN) money as source of emergency fund allocation. In addition, the use of gold as an emergency fund financial instrument was also found to be relevant to the Malaysian context. The holding of gold was a behaviour found not to be gender-related. In terms of the financial instruments categories, most of the young student adults in this research were found holding intermediate fund rather than other emergency fund categories.

The modelling and deeper understanding of emergency fund behaviour revealed overall of emergency fund formation behaviour and preference for financial products in response to future emergencies. This finding will help financial service providers and financial educators to offer more effective advice and fulfil the needs of their clients. Moreover, this research makes a significant contribution to the field of personal financial planning by improving our understanding of the application of behavioural finance theory, and suggesting that behavioural factors contribute to an individual's financial planning and actions.

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LIST OF ABBREVIATIONS AND TERMS

AKPK	Credit Counselling and Debt Management (Malaysia)
AVE	Average Variance Extracted
BNM	Bank Negara Malaysia (Central Bank of Malaysia)
CFA	Confirmatory Factor Analysis
CFP Board	Certified Financial Planner Board of Standards, Inc.
CFP®	Certified Financial Planner
DMP	Debt Management Programme
EFA	Exploratory Factor Analysis
EFFB	Emergency Fund Formation Behaviour
EPF	Employees Provident Fund (Malaysia)
FLEC	Financial Literacy and Education Commission (Malaysia)
FPA®	Financial Planning Association
FPSB	Financial Planning Standard Board Ltd.
GOF	Goodness of Fit Indices
IPPBM	Institute for Research in Youth Department, (Malaysia)
LCH	Life-cycle Hypotheses

MdI	Malaysia Department of Insolvency
MLE	Maximum Likelihood Estimation
PTPTN	Perbadanan Tabung Pendidikan Tinggi Nasional (Student Loan)
PFP	Personal Financial Planning
SEM	Structural Equation Modelling
TPB	Theory of Planned Behaviour

CHAPTER 1

INTRODUCTION TO THE RESEARCH

1.0 Introduction

This chapter establishes the general landscape surrounding this study. It discusses the background to its focus and the rationale and aims of the research therein.

1.1 Research Background

Typically, it has been suggested that research into financial behaviour has tended to deal with behavioural factors. Greninger, Hampton, Kitt and Achacoso (1996) suggest that a rational or typical individual does not really exist. Fünfgeld and Wang (2009) uphold the idea that an individual's financial behaviour tends to take the opposite path to what orthodoxy suggests. Since financial behaviour varies across the life-cycles of individuals, it is safe to say that the financial behaviour individuals might be expected to exhibit changes depending on context and circumstances (Greninger, Hampton, Kitt & Achacoso, 1996).

The ways that young adults experience problems in their financial behaviour has been debated and discussed by the extant literature. FLEC (2012) reported that the financial behaviours of young adults are among the top issues that need to be studied. The report suggested that there are gaps in the understanding of the behavioural factors affecting financial behaviour among young adults. Equally, extant studies indicate that understanding financial activities that involve human actions is complex and difficult to measure (Hira, 2012; Campbell, 2006).

More research on financial behaviour among young adults would help policy makers and practitioners to define the best approach to this group (Xiao, Ford & Kim, 2011). One of the challenges facing current models of financial education is also to deal with the complex relationship between human behaviour and financial action, to make sure it becomes effective (Hira, 2012).

Relevant to both of these issues is the question of how individuals with limited resources face stressful economic conditions and plan to survive during emergency conditions (i.e. sudden unemployment and illness), which motivates further research (Anong & DeVaney, 2010). The current literature indicates that the financial commitments among young adults are at a very stressful state, apart from where it is commonly known that a larger portion of this group face financial problems and have limited resources (Jian Xiao & Yao, 2014).

In relation to this, one of the most recommended strategies currently by financial planners is to encourage individuals, especially young adults, to prepare for emergency expenses that they may need in future, such as allocating the emergency fund (Chieffe & Rakes, 1999). The emergency fund is a concept in which an individual's financial behaviour and motivations are specific, for instance, the savings and investments motive for emergency only. In relation, individuals could have more than one saving motive, such as retirement, leisure or education (Canova, Rattazzi & Webley, 2005; Fisher & Montalto, 2010), savings for major purchases (Xiao & Fan, 2002), or precautionary saving motives (Keynes, 1937); and it could be argued that not all individuals have mutually exclusive reasons for saving (Dynan, Skinner & Zeldes, 2004). To date, empirical research on emergency funds has been less focused on

behavioural perspectives. The question of how young adults prepare for emergency situations, alongside whom or what influences their decisions has yet to be comprehensively answered. This is because previous studies on emergency funds mainly focus on observed factors, such as income and wealth. However, Xiao (2008) argued that human behaviours are not directly measured; and financial behaviour should be measured beyond that.

1.2 The Needs of Studies on Emergency Fund from a Behavioural Finance Perspective

Studies examining individual cohorts in preparing for emergency fund, especially among young adults, have been discussed since 1985. The first study by Johnson and Widdows (1985) has been suggested to increase the awareness of this group, since this group shows inadequate level of emergency fund holding. Most of the later studies on the theme of emergency funds addressed a similar issue. It has been argued that a complete understanding of the emergency fund issue could be achieved if it is studied from the behavioural perspective (Joo & Grable, 2006). However, previous studies are very much lacking in this aspect. Perhaps, this is due to limited data sources (Joo & Grable, 2006).

Fisher and Montalto (2010) pointed out that there is a need to examine the theoretical and empirical models that could best explain the saving behaviours. This thesis predicts by modifying the theory of planned behaviour by Ajzen (1991) could providing the behavioural factors that might fit into the research objective. Factors such as individual attitude, subjective norms and perceived behavioural controls, alongside inherent propensity to plan have been reported to have some influence on an individual's

financial behaviour. However, the effect of these factors on saving, consumption and investment behaviours for an emergency remains unclear among young adults.

Given the Malaysian context of this study, other related behavioural factors can be considered, including culture and individual preference. It can be argued that institutional factors have shaped financial behaviours in this context. For instance, it has been shown that individuals in China have more savings for emergencies than those in America, when there is an uncertainty in the level of future income (Yao, Wang, Weagley & Liao, 2011). This is because of there is a lack of social insurance or social welfare programmes offered in China; whereas individuals are provided with unemployment insurance and various welfare programmes in the U.S. This finding indicates that the institutional setting of a country can drive financial behaviour.

Similar to China, Malaysia does not extensively provide social welfare. Thus unemployment or income cuts can have a profound impact on individuals and communities, especially among the young adults group. Besides educational-related expenses, some might face more financial burdens hence are unable to pay current financial needs and could find it more difficult to cover their needs during emergencies. A relationship has been proposed between an individual's financial behaviour and their institutional context (Snyder, 1974; Lee & Sawada, 2010). As such, assessing emergency fund behaviours in developing countries would lead to different perspectives because each would arise from different institutional settings. Most of the previous studies on emergency funds focus on developed countries such as the United States and Australia (Johnson & Widdows, 1985; Chang & Huston, 1995; Huston & Chang, 1997; Chang et al., 1997; Bi & Montalto, 2004; Hatcher, 2000; Worthington, 2004; Bhargava

& Lown, 2006; Anong & DeVaney, 2010; Babiarz & Robb, 2014). None of these have focused on a developing country such as Malaysia. As stated by Worthington (2004), studies on emergency fund were exclusively focusing on North America; and it was suggested that these may also need to be carried out in the context of a different country (Kostakis, 2013).

1.3 The Needs of Studies on Emergency Fund Behaviour in the Malaysian Contexts

The need for a study that addresses emergency fund behaviour in the Malaysian contexts has increased because of the current financial stresses challenging young adults. Research carried out in 2011 by the Institute for Research in Youth Department, Malaysia (IPPBM) under the Ministry of Youth and Sport examined individuals aged 21–40 years. The research reported the following key findings:

1. Around 60% of respondents did not have permanent jobs and sufficient income to meet their needs.
2. Almost 74% said that they have to take on other jobs or work overtime to supplement their main current job.
3. 45% of respondents said that they do not have any savings with which to cover their emergency needs.
4. 63% of respondents said that they feel worried and think that they are unable to pay back their loans.
5. 48% of respondents said that they felt that it was very difficult to get a job matching their qualifications.

These findings clearly indicate that the issue of financial stress among this group is non-trivial. In addition, the Central Bank of Malaysia (2012) reported that Malaysia had

implemented a minimum wage policy (Ministry of Human resource, 2013b) on 1st January 2013. The wage was increased from RM 674 (£102) to RM 900 (£137) per month for peninsular Malaysia, and RM 579 (£88) to RM 800 (£121) per month for Sabah, Sarawak and the Federal Territory of Labuan, covering both the local and foreign workforce, except for domestic workers such as domestic co-workers and gardeners. Although many firms reported that they would not reduce the existing workers, nevertheless approximately 25% of the firms indicated that they would reduce their hiring of new workers. These outcomes are worrying. The Malaysian Minister of Human Resource's noted:

“These lower income groups, especially in urban areas, are facing hard times to make their ends meet due to ever-increasing cost of living, particularly on the back of price hike in daily necessities. The minimum wage regulation should be at least able to lessen the severity of their hardships. However, some quarters argue that the setting up of the national minimum wage would lead to negative consequences as it could distort market forces. In addition, the minimum wage could also cause job losses in lower occupation categories where demands still exist for vulnerable groups especially for those working in rural areas. This in turn could result in higher unemployment rate for the country.” (Ministry of Human Resource, 2012).

Equally important, in 2012, the Malaysian's Ministry of Human Resource (2013b) gazetted the Minimum Retirement Age Act 2012, effective from July 2013. In Part Two-Section 4 (1), the Act states that the new minimum age for retirement is 60 rather than 55 years old. These compounds the employment issue raised in the IPPBM report. As such, the research indicates further financial stresses on young adults in the future. The uncertainty of the current economic climate and shortage of available permanent jobs indicates that financial needs during an emergency could potentially increase, along with the general level of indebtedness among the young adults. The issue of a lack of emergency funds among the age 60 and older group in Malaysia was noted by

Yin-Fah & Masud (2010). This study argued that this situation prompted some to borrow from loan sharks to cover their emergency needs to survive. This suggests that emergency funds are an important area of study.

Previous studies note that financial education is one of the important elements in increasing financial well-being among individuals. The importance of financial education among Malaysians has driven the Central Bank of Malaysia to collaborate with the Credit Counselling and Debt Management Agency (AKPK) (Norhana & Hua, 2009). Established in 2006, the objective of this collaboration was to help individuals, especially young adults, make well-informed financial decisions (Jariah, Husniyah, Laily & Britt, 2004). In the subsequent initiative, a financial education programme was set up specifically for the young adult group. Known as the POWER! Programme, this was launched in 2011 (AKPK, 2011). Other initiatives involve the introduction of the Malaysian Higher Educational institutions of financial planning elements to undergraduate syllabuses.

On another note, the leading role of Malaysia in the Islamic banking and finance industry would suggest a totally different perspective on the financial behaviour of young adults. A wider choice of Islamic financial instruments, together with the usual conventional instruments, plays a key role in shaping behaviours. In this regard, religion could be an important factor as much as it appears to affect the sources preference among individuals in possessing an emergency fund. However, due to the multiracial feature of Malaysia, Haron, Ahmad & Planisek (1994) argue that religion is not necessarily a factor, since the Islamic financial instruments are also widely accepted by non-Muslim customers in Malaysia.

1.4 Research Aims, Objectives and Research Approaches

The aim of this research is twofold. The first aim is to research emergency fund provision behaviour among young student adults, alongside investigating the financial instruments that tend to be put aside as emergency fund. The second aim is to extend the discussion of the extant literature in the context of young student adults emergency fund behaviours in Malaysia.

The main objective of this study is to investigate and to understand what influences and contributes to young student adults in allocating their emergency fund. Therefore, in order to achieve the research aims, this thesis only focuses on those young student adults that currently hold emergency fund. Therefore, the objectives are extended and outlined as follows:

1. Developing emergency fund formation behaviour models

To examine the effect of behavioural factors (i.e. attitude, subjective norm, perceived behavioural control and propensity to plan) towards emergency fund formation behaviour. This forms the required theoretical framework in understanding the emergency fund formation behaviour.

2. Analysing the emergency fund provision behaviour, financial sources and instruments

To examine specific issues on emergency fund provision behaviour namely adequacy level of emergency fund holdings, financial instruments used and financial sources to allocate the emergency fund.

This research was conducted using online questionnaire and survey interview. A survey questionnaire was used to gauge respondent's perception on emergency fund formations and preference towards sources of emergency fund among the young student adults in Malaysia. Next, extended survey interviews were employed to gain further understanding of the emergency fund behaviour.

1.5 Potential Contribution

This research is carried out to potentially fill a current research gap in the emergency fund literature, as well as providing practical inputs to the financial industry in its development of products and services.

1.5.1 Filling Current Research Gap

This study is dealing with the descriptive approach as well as the quantitative approach in understanding the emergency fund behaviour. These approaches will demonstrate the actual individual's financial behaviour and behavioural patterns (Xiao et al., 2011). Deidda (2013) suggests that further research on savings for emergency behaviour could contribute to the current literature. In addition, it is also argued that the qualitative research approach is more appropriate when dealing with factors like religion and culture (Marks, Dollahite & Dew, 2009).

The lack of modelling (Fisher & Montalto, 2010) and tested theories in the previous studies give rise to a number suggestions for future research (Joo & Grable, 2006). As mentioned by Fisher (2010), the life-cycle hypotheses and precautionary motives used by previous studies on emergency fund are still unable to provide a plausible

explanation about the savings and investment behaviour for emergency motive. Therefore, this research is potentially contributing in this aspect.

1.5.2 Financial Education Policy

The current education on financial knowledge in Malaysia is designed specifically to target young adults. If there is the possibility of influence from other social agents, such as family or friends, or other cultural or behavioural factors, then merging these influences could be more effective and beneficial in designing the education module. This could be suggested to be more helpful in providing more impact on the application. The studies on emergency fund could potentially help financial planners, educators and counsellors to encourage individuals to prepare emergency funds (Bhargava & Lown, 2006). In addition, this research also later examines borrowing behaviours in relation to emergency fund preparation. Understanding attitudes towards credit behaviour among young adults would benefit many stakeholders, such as individuals, financial educators, parents and even financial providers (Chudry, Foxall & Pallister, 2011).

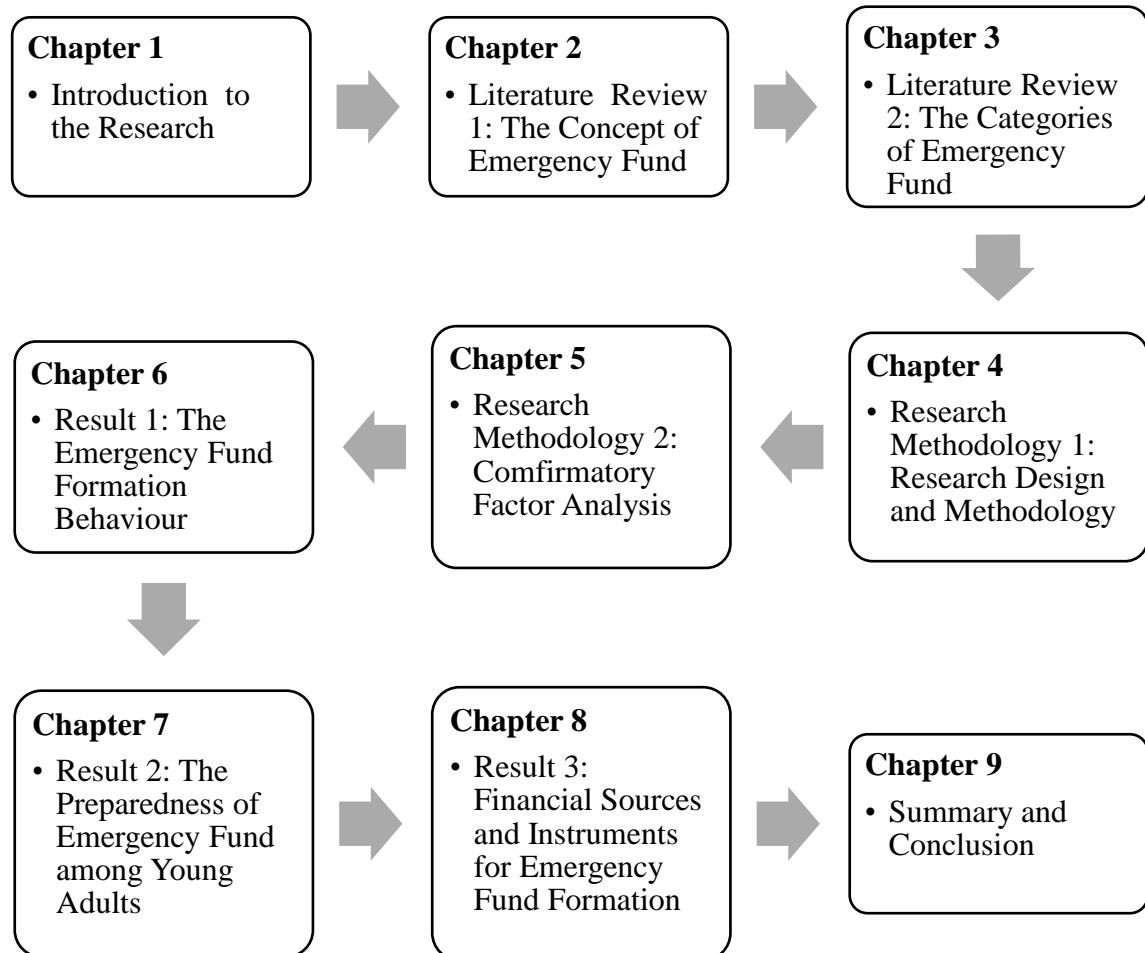
1.5.3 Financial Industry

This research also examines the emergency fund source and financial instrument preferences displayed by young adults. Since one financial instrument for allocate emergency fund might be preferred to another, financial institutions will be able to benefit by improving marketing for those particular financial products.

1.6 Thesis Organisation

The structure of this thesis is illustrated as follows:

Figure 1.1: Structure of the Thesis



Chapter One introduces this research, covering the overall background of the research. Presenting the needs of the research from the literature and context review highlights the gaps. The aim and overall research approach are provided, together with the potential contributions. **Chapter Two** presents the first part of the literature review, mainly covering the discussion of the concept of emergency fund. It also reviews the conceptual and empirical studies. **Chapter Three** is the second part of literature review that critically discussed the related studies on the categories of emergency fund that

greatly relates to the context of this research. **Chapter Four** covers the overall methodology involved in this research. Research questions, research design, research method and instruments used are laid out. This chapter also provides an explanation of the data analysis procedure. **Chapter Five** provides details of the analysis procedure and results on Confirmatory Factor Analysis (CFA). The procedure covers the unidimensionality test and reliability and validity of the measurement models. Additionally, the descriptive analysis of the respondents is revealed in this chapter. **Chapter Six** answers research question number one and two. In order to do this, the Structural Equation Modelling (SEM) was run. The hypotheses of the research are tested and the later the results are triangulated to the interview results. This chapter also discusses the descriptive analysis of the interview's participants. **Chapter Seven** reveals answer to the third research question. It basically discusses the results on method of preparation and adequacy of emergency fund among young student adults. **Chapter Eight** is about the analysis on the financial sources and instruments that relate to emergency fund formation behaviour among young student adults, which particularly answers the fourth research question. Finally, **Chapter Nine** ends with the summary and conclusion of the thesis. This chapter also highlights the contributions and limitations and hence suggests recommendations for future research.

CHAPTER 2

LITERATURE REVIEW 1: THE CONCEPT OF THE EMERGENCY FUND

2.0 Introduction

Chapter 1 explained the aims and objectives of this thesis. In order to understand the emergency fund concept, this chapter examines the relevant concepts, definitions, theories and contexts related to this term. This chapter's discussion will cover four major topics: (i) financial behaviour; (ii) the concept of emergency fund; (iii) the theories that relate to emergency fund behaviour; and (iv) the emergency fund studies from the context background.

2.1 Financial Behaviour

Financial behaviour is the behaviour displayed towards financial activities. Financial behaviour covered under the behavioural finance paradigm is different from the traditional paradigm of financial behaviour. In the traditional finance paradigm, individuals are assumed to be rational when making financial decisions (Miller, 1986). However, the behavioural finance paradigm assumes the opposite by including emotional elements in the decision-making process (Ricciardi & Simon, 2000; Singh, 2010). Since behavioural finance claims that individual's behaviour toward financial decisions is different from the traditional finance paradigm (Baltussen, 2009), to a certain extent, it is also related to the social psychology (Ritter, 2003; Xiao, 2008). Xiao (2008, p.70) defines financial behaviour as "human behaviour that is relevant to money management. Common financial behaviours include cash, credit, and saving behaviours." Understanding of financial behaviour has become a challenge because it

involves the intricacy of human behaviour (Hira, 2012). Besides, the financial behaviour is also difficult to measure (Campbell, 2006).

Related to this, the rational financial decision could be claimed as a decision that the individual “should” do. Campbell (2006) used the term “positive household finance” for those who make the financial decisions following the acquisition of pertinent knowledge. Then further argued that when this is the case, this group does what they “should” do and they are rational. Fünfgeld & Wang (2009), for instance, categorised the individuals who are able to deal with the financial market by wisely managing their money under the category of rational. However, it is further argued that financial decisions made without considering what they “should” do then could be regarded as irrational. Irrational financial decision-making offers alternative explanations in contrast to mainstream finance. The decisions that planning is to be made or had been made with consideration of psychological factors or other factors that are normally assumed to be constant by the mainstream finance is mentioned as behavioural decision making, which may lead to irrational decisions. According to Campbell (2006), this group is “normative household finance” and to understand their behaviour, it is argued that the theory that should be used is beyond the financial theories which are represented in finance textbooks.

Previous studies suggest that an understanding of financial behaviour is needed by responding to current market challenges. Through unwillingness to manage financial behaviour, individuals will tend to make the wrong decision when making a financial decision. For example, the issue of arbitrage (Shleifer & Vishny, 1997), which is the misvaluation of financial assets, and cognitive bias (Ritter, 2003), which refers to the

way individuals think. It is further argued by Ritter (2003) that these two elements are the two building blocks in behavioural finance.

Therefore, this research will focus on financial behaviour among young student adults; specifically their planning for emergency fund provision behaviour. It is undertaken purposely to understand the complexity of human behaviour toward the financial behaviour preparation for uncertain events. As emphasised by Shiller (2006), the core issue of behavioural finance is related to the failure of individuals to prepare enough financial need for their future; then, could be suggested as being related to the individual's financial behaviour from a young age. This will be further explained later in this chapter.

2.2 Financial Behaviour and Financial Educational Perspective

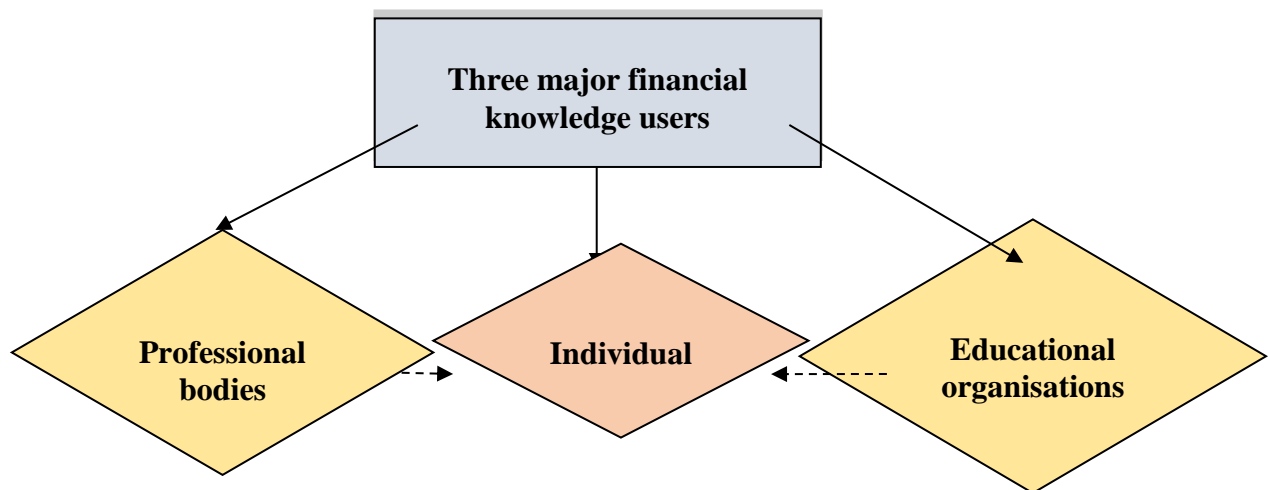
Studies addressing financial behaviour are found to influence on the impact in education perspective (Xiao, 2008; McCormick, 2009). Financial education mainly aims to educate people by providing financial information. However, the challenge of the financial education is mainly to deal with the individual's behaviour itself. Therefore, understanding financial behaviour is expressly undertaken to improve the understanding of human behaviour and develop specific tools. Further, it argue will become the information for professionals, such as financial educators (Xiao, 2008, p. 70), financial planners and financial counsellors (Xiao et al., 2011).

2.2.1 Financial Education Resources

The existing literature could be found to indirectly mention that there are several types of financial educators. Therefore, this research suggests that financial educators could

be summarised into two types: (i) professional bodies, who provide training for professional qualifications titles and provide services to customers with financial advice and knowledge; and (ii) educational organisations, in which financial knowledge is provided in the modules or courses offered, providing formal education for financial knowledge development. Although the financial educators provide financial knowledge, it could be suggested that individuals are the most important component in the implementation of financial knowledge. This is because some of them may not refer to any professionals and experts and make decisions not encompassed by a standard financial framework (Campbell, 2006). Thereupon, Figure 2.1 proposes the possible connection between these three components:

Figure 2.1: The Possibility of Connections between Individuals, Professional Bodies and Educational Organisations



Note: Developed for this research.

This diagram indicates that decisions made by individuals regarding financial knowledge can be influenced by the suggestions of professional bodies – but only if the individual seeks advice from these bodies. Similarly, an individual might be influenced by educational organisations. This might occur if the individual is receiving a formal

education program from the institution. This research, however, will only focus on the major financial knowledge user (i.e. the individual), specifically the young student adults groups that are based in Malaysia, as is consistent with its aims and objectives.

2.2.1.1 The Roles of Professional Bodies

Professional bodies could be divided into two types: professional financial planners and professional credit counsellors. Both organisations provide services to the public and offer financial education in different approaches when dealing with financial issues.

2.2.1.1.1 Professional Financial Planner

Certified Financial Planner Board of Standard, Inc. (CFP Board) is the non-profit organisation that owns the CFP® (Certified Financial Planner) certification, which is based in the United States. Individuals who desire to be a professional financial planner need to be recognised by the CFP Board by gaining the CFP® certification. An individual who attains this are called CERTIFIED FINANCIAL PLANNER™ Professional (CFP® Professional).

The financial knowledge provided by this body is personal financial planning knowledge. The CFP Board has provided information to the public about personal financial planning knowledge via education since December 12, 1969 (CFP Board, n.d.-a). The certified program running outside the U.S. was transferred by the CFP Board to the International CFP Council: Financial Planning Standard Board Ltd. (FPSB). The financial planners, who are members of the CFP Board, are already trained to provide professional services as financial planners for the public. Their approaches are designed

to be suitable to their client's needs. These financial planners are actively practicing personal financial planning knowledge as practitioners.

Warschauer (2002) suggests that the first college established to specifically teach financial planning was founded by Mavericks in 1972, today known as the Financial Planning Association (FPA®). It was later, in 1985, named as a “professional era” when the college for financial planning transferred the education-based CFP® mark to the CFP board. Then, the first CFP Practitioner course was conducted in 1987, which focused on education for Professional Financial Planner as a profession.

In addition, the Financial Planning Association (FPA®) offers networking for their members, as it is largest financial educational membership organisation in the United States. This organisation, as a centre of connection among financial planners, financial services experts, educators and students, also provides resources for the public to find an appropriate financial planner who upholds the standard of care. Standard of care is a standard system by FPA® to their members: an ethical, objective and client-centred process (FPA®, n.d.-a).

In relation to this, the numbers of professional financial planners could be found to be extensively developing in some countries, such as in Australia, Canada, United Kingdom and United States; other countries such as Brazil, India, Singapore and Malaysia also show growth (Warschauer, 2002).

2.2.1.1.2 Professional Credits Counselling

Credit counselling is a service offered by non-profit business organisations at no cost to the public. Individuals that search for this service commonly have debt problems (e.g.

personal debt) and these organisations will assist to manage the debts and any financial struggles. A debt management plan is a specific program designed by credit counselling to clear current debt. The counselling body will, usually, deal with the creditor on behalf of the individual to negotiate and structure a new settlement plan for the debts, which is affordable for the individual's current financial status. These bodies may also offer free financial information on their official web pages.

According to the Association of Independent Consumer Credit Counselling Agencies (AICCCA), most of the credit counselling organisations in the United States are registered under their organisation (AICCCA, n.d.). The members of AICCCA are non-profit credit counselling companies and all members follow the setting of the standard for the industry, which is specified by AICCCA.

Individuals in the United Kingdom can also access free credit counselling services through the StepChange Debt Charity, formerly known as the Consumer Credit Counselling Service (CCCS). Their services are available by phone or online (StepChange Debt Charity, n.d.).

Credit counselling services are also provided in some countries in Asia, such as Malaysia and Singapore. This service is regulated by the corresponding government agency. The central Bank of Malaysia (Bank Negara Malaysia) was responsible for the formation of credit counselling in Malaysia; and credit counselling in Singapore is a member of the National Council of Social Service.

2.2.1.1.3 Individuals and Professional Bodies

The factors that drive individuals to seek for advice from professional bodies are described in the existing literatures. Hanna & Lindamood (2010) argued that the attitudes toward risk contribute towards the demand for the financial planner and their services. They further argue that risk-averse households are seeking assistance from financial planners, which is resulting in comprehensive financial planning. However, Hanna (2011) concludes that those who display low-risk tolerance (unwillingness to take investment risks) are less likely to seek advice from a financial planner. Consequences to individual's financial abilities, the individual current financial status such high income (Elmerick, Montalto & Fox, 2002) and wealthier (Chang, 2005) are highly rely for financial planner to properly allocate their income and wealth besides affording to pay the professional fees.

It has been argued that the incentive to seek the advice of a financial planner highly correlates with an individual's educational background (Elmerick et al., 2002; Marsden, Zick & Mayer, 2011). This suggests that the higher an individual's educational background, the more likely it is that they will seek for financial advice from a financial planner. In addition, individuals over 65 years old with the least financial knowledge are reported likely choose to pay for financial planner (Finke, Huston & Winchester, 2011).

In fact, an individual's background also contributes to whether or not he or she will seek advice from a financial planner. Asian people, for example, are less likely to seek a financial planner advisor, unlike white or black people (Hanna, 2011). This may

suggest that customs or background can affect an individual's behaviour towards financial information and advice preference.

Seeking financial advice can help to contribute to positive financial outcomes. Individuals, for example, have been reported as being able to increase their savings, even during the economic downturn, because of the assistance of financial planners (Marsden et al., 2011).

2.2.1.2 The Roles of Educational Organisations

Educational organisations play some specific roles in terms of delivering formal knowledge to individuals and providing spaces for academics to develop and expand the existing paradigm of financial knowledge. Today, there are many educational organisations, such as universities around the world, offering financial planning courses or courses similar to financial management to individuals, alongside their future career and current knowledge development. The other courses, for instance, business, finance, economics and accounting, could also be seen to contribute to understanding some aspect of the financial knowledge concept.

2.2.1.2.1 Individuals and Educational Organisations

The roles of educational organisations in offering different levels of education or specific subjects related to financial knowledge are found to relate to an individual's level of financial knowledge. Several studies have revealed the influence of educational organisations and educational background on the level of financial knowledge among individuals (Volpe, Chen & Pavlicko, 1996; Chen & Volpe, 1998). Volpe et al. (1996) found that majoring in particular subjects that are related to business, finance and accounting courses contribute to the development of an individual's financial

knowledge, particularly in the investment field. Their study had chosen the college student as their samples.

In addition, the individual's level of education could indicate their financial behaviour in as much as the higher their level of education, the higher their level of financial knowledge is likely to be (Bi, 2004; Chen & Volpe, 1998; Hira, 2012; Huston & Chang, 1997). Even though several studies have revealed that educational background does affect to an individual's financial decisions, our understanding remains incomplete with regard to the individual's behaviour in setting up an emergency fund. A study by Chang, Hanna & Fan (1997), for instance, argues that the relationship between preparing emergency fund behaviour and an individual's educational background is relatively unknown. The concept of emergency fund will be discussed further, later in this chapter.

2.3 Financial Behaviour among Young Adults

Previously, it was concluded that an individual's financial behaviour may be influenced by their knowledge or the services available via formal channels, such as professional bodies and universities. This section will focus on the possible factors that may influence an individual's financial behaviour if they may not rely on these channels. However, as explained previously, the focus of this research, parallel with the research objective, is to study the young student adults group.

Young adults are one of the many groups that need to be prepared for financial challenges. This group in particular may have limited sources of income and mostly struggle with financial problems due to a lack of financial knowledge (Cull & Whitton, 2011; Jariah et al., 2004; Shim, Xiao, Barber & Lyons, 2009). Studying this group may

therefore contribute to an understanding of the financial knowledge of young adults, aiding them to become more independent in their financial behaviour during their adulthood and better able to cope with economic changes or challenges (Serido, Shim & Tang, 2013).

Similarly, it is important to develop positive financial behaviour among young adults, given the impact that finances can have on an individuals' life. For example, individuals with positive financial behaviour have been shown to have positive relationships with their families (Xiao, Sorhaindo & Garman, 2006), while positive financial behaviours also contribute to increased academic achievement among young student adults in college (Xiao, Tang & Shim, 2009).

2.3.1 Factors Influencing Financial Behaviour among Young Adults

The financial behaviour among young adults could be influenced by many factors. Some may be the following:

2.3.1.1 Financial Knowledge

Financial knowledge has a relationship with an individual's financial behaviour. Notwithstanding, the relationship between age and financial knowledge remains unclear. Several studies that have investigated the effects of age on an individual's financial knowledge, financial behaviour and financial decision making have indicated a positive correlation (Chen & Volpe, 1998; Huston & Chang, 1997). However, Volpe et al. (1996) found that age has no effect towards individual investment knowledge.

2.3.1.2 Financial Literacy

The relationship between financial knowledge and financial behaviour in young adults is widely explored in extant literature. The complexities of financial products in the current market require individuals not only have financial knowledge, but financial literacy: both of which contribute to the impact of a financial decision (Lusardi, 2008; Cull & Whitton, 2011).

However, some studies have claimed that young adults are financially illiterate (Curto, Lusardi & Mitchell, 2009; Norvilitis et al., 2006). Such illiteracy could lead to financial problems: for instance, massive indebtedness. There are several definitions of financial literacy. The summaries of definitions are shown in Table 2.1. Huston (2010) suggested that individuals should have confidence and be able to use their financial knowledge to make financial decisions. This agreed with the definition suggested by Remund (2010). Notwithstanding, this author includes the major considerations that should be taken into account when making financial decisions: life events and economic conditions. Both definitions agree that a decent level of financial knowledge among individuals leads to financial literacy.

Besides, the importance of financial literacy had been recognised as the highest required financial skills among individuals to increase the individual standard of living and financial well-being (ASIC, 2011). The idea that financial literacy is a required skill that could be important to individuals in negotiating their current financial surroundings cannot be declined. Although how much information that is provided to public, but yet together with the complexity of current financial products offered in the market, the skills still required to be practicing the knowledge in handling the complex products are

really important. On the whole, definitions agree that financial literacy can be described as the knowledge and skills required in making informed financial decisions.

Table 2.1: Summaries of Financial Literacy Definition

Author	Definition	Key argument
Huston (2010, p.306)	“Financial literacy could be defined as measuring how well an individual can understand and use personal finance-related information.”	- Depends on the individual.
Remund (2010, p.284)	“Financial literacy is a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions.”	- Depends on the individual but also considers the life event and the economic effects.
Australian Securities & Investments Commission (2011, p.10)	“Financial literacy is about understanding money and finances and being able to confidently apply that knowledge to make effective financial decisions.”	- Depends on individual’s understanding and ability

Cited and adopted from: Huston (2010), Remund (2010), Australian Securities & Investments Commission (2011)

In addition, good practice of financial knowledge reflects from the individuals' financial literacy level (Huston, 2010). The level of financial literacy among individuals is found to be related to factors such as the socio-demographic they occupy (Lusardi et al., 2010), their financial education background (Hira, 2012) and their general education and experience (Huston, 2012).

2.3.1.3 Social Agents

This research only focuses on two social agents likely to influence the financial behaviour of young adults: family and friends. This is because both social agents were found mentioned in previous studies among the factors that most contributed to young adult's financial behaviour (Shim et al., 2009; Serido, Shim, Mishra & Tang, 2010; Shim, Barber, Card, Xiao & Serido, 2010; Serido et al., 2013).

2.3.1.3.1 Family

Family is found to have an affect on young adults' financial behaviour, especially towards their savings and budgeting activities. Gutter, Garrison & Copur (2010) argued that college students mainly followed their parents' financial behaviour. Parents, then, play an important role in fostering positive financial behaviours by offering open discussions on financial information. This relates to the findings by Hira (1997) and Jorgensen & Savla (2010) that financial attitudes and beliefs among young adults are influenced by their parents.

Thus it can be seen that family is one of the sources of financial knowledge and financial information among young adults (Curto, Lusardi & Mitchell, 2009; Shim et al., 2009). Some studies (Chiteji & Stafford, 1999; Lusardi, Mitchell & Curto, 2010; Pope & Howe, 1991) found that young adults' financial knowledge is strongly informed

by their family background (i.e. parents' financial education and financial practice has been shown to influence financial behaviour among young adults).

Savings behaviour among young adults, for instance, was found to have a positive relationship with the advice and encouragement of their parents (Webley & Nyhus, 2013). The study indicated that parental influence increased the ability to control spending and influence a preference for saving among Dutch young adults. Curto et al. (2009) argued that the young adults' knowledge towards risk diversification is also related to their parents' history of financial activity. This means that if the parents were found to have held stocks or retirement savings during their previous teenagers' life, then it influenced their children's understanding of financial behaviour.

2.3.1.3.2 Peer and Friends

Peer influences on financial behaviour among individuals lessen as the age of the individual increases. Young adults are found to consider peers and friends as the next source of financial information after their family (Hira, 1997; Gutter et al., 2010; Xiao, Ford & Kim, 2011). This shows that friends are the other important social agent among young adults.

Friends were also found to be important when considering debt channels, as the young use them to borrow money to cover pressing financial needs (Worthington, 2004). Related to this, it was also found that peer-oriented young adults were less likely to save money (Erskine, Kier, Leung & Sproule, 2006).

2.3.1.4 Health Levels

An individual's level of health also shapes their financial behaviour. Individuals with health problems can take on more debt, especially on credit cards (Drentea & Lavrakas, 2000). This can be because they are unable to work but still need to pay for medical treatments. Since young adults tend to make less provision for healthcare, the potential to acquire future debt is high (Rutherford & Fox, 2010). However, it has been shown that poor health has an impact on savings behaviour. Individuals with poor health have been found to increase their savings (Fisher & Montalto, 2010).

2.4 Financial Stresses among Young Adults

The young adult group also cannot run away from financial stresses (Jian Xiao & Yao, 2014). Financial behaviour is one of the challenges facing young adults. During this stage, individuals start to become independent and develop their lives. Related to this, Worthy, Jonkman & Blinn-Pike (2010) found that young adults had mostly engaged in serious financial problem because of education expenses, besides easy access to credit cards.

Young adults have less savings, especially in planning for a time horizon of over one year, in addition to less experience in managing their money (Rutherford & Fox, 2010). It is further argued that financial wellness among this group depends on factors such as spending behaviour, planning horizons and credit management. As stressed by Shiller (2006), the failure of individuals to prepare for their future financial needs is a reflection of their financial behaviour from a young age. In relation to this, it most recommended by financial planner is to encourage individuals, especially young adults, to prepare for emergency expenses that they may need in future (Chieffe & Rakes,

1999). However, to date, very little attention has been given to the study of young adults' behaviour in relation to this, especially in preparing for the emergency fund. Currently, most literatures focus on the adequacy level that young adults are able to allocate, rather than how they may prepare and what influences their behaviour towards emergency fund provision. Future sections will review the literature that addresses the topic of emergency fund to assess the current gap in the studies.

2.5 Emergency Fund Concept

Emergency events are related to an unexpected or uncertain crisis, such as sudden unemployment or illness (Johnson & Widdows, 1985) and might also occur from the unexpected increase in consumption current needs (Bi & Montalto, 2004). Preparing for emergency events by forming an emergency fund could be suggested to involve financial behaviour. Savings consumption and investment behaviour are highly related to this financial activity. Despite the fact that there is no specific definition for the emergency fund, most studies had tended to use definition proposed by Johnson & Widdows (1985). This proposes that an emergency fund is purposely to allow an individual to survive during an emergency without affecting their normal standard of living. The authors further argue that individuals need to put aside some assets or make some investments specifically for this purpose. Supporting this, Huston & Chang (1997) also argued that it is important to prepare for future unforeseen emergencies.

2.5.1 Overview of Personal Financial Planning

Since preparing for an emergency fund is about financial preparation, it could be suggested that this relates to an individual's personal financial planning behaviour. This is because the reason for allocating the emergency fund, which had been discussed

previously, is to prepare for future emergency events. Financial planners are found to encourage individuals to have an emergency fund (Anong & DeVaney, 2010; Hilgert, Hogarth & Beverly, 2003a). Consequently, the discussions in the existing literatures on emergency fund, such as the adequacy level, are mainly referring to the suggestion by the financial planner. Therefore, this section will discuss the overview of personal financial planning, which later will be used to relate to the emergency fund perspective.

2.5.1.1 Definition of Personal Financial Planning (PFP)

Personal financial planning (PFP) is recognised as knowledge that provides the best practice in managing an individual's income and wealth. The implementation of PFP depends on individuals, as there are differences of the individual's goals and needs.

The existing literature presents several definitions for personal financial planning. The following table summarises the definitions, together with some of the key terms used:

Table 2.2: Summaries of Personal Financial Planning Definitions

Authors	Definition	Key Terms
Warschauer (2002, p.204)	“Financial Planning is the process that takes into account client's personality, financial status and the socio-economic and legal environments and leads to adoption of strategies and use of financial tools that are expected to aid in achieving the client's financial goals.”	<ol style="list-style-type: none"> 1. Process 2. Adoption of strategies 3. Financial tools 4. Financial goals

Authors	Definition	Key Terms
Altfest (2004, p.53)	“Personal financial planning is a method of preparing for future household financial needs in an efficient manner.”	1. Method 2. Preparing 3. Financial needs
Redhead (2008, p.5)	“Personal financial planning is the process of planning one’s spending, financing, and investing so as to optimise one’s financial situation.”	1. Process 2. Optimised financial situation 3. Planning 4. Financial situation
CFP Board (n.d.-b)	“Financial planning is the process of meeting your life goals through the proper management of your finances.”	1. Process 2. Life goals 3. Management
FPA® (n.d.-b)	“Financial planning is the long-term process of wisely managing your finances so you can achieve your goals and dreams, while at the same time negotiating the financial barriers that inevitably arise in every stage of life.”	1. Process 2. Managing 3. Goals and dreams 4. Negotiate the financial barriers

Cited and adopted from: Warschauer (2002), Altfest (2004), Redhead (2008, p.5), CFP Board (n.d.-b), FPA® (n.d.-b).

From the definitions stated, there is no one specific and agreed meaning for PFP. Most definitions show that the main term used to describe PFP is the word “process.” By contrast, Altfest (2004) used the term “method” to explain the meaning of personal financial planning. One question that needs to be asked, however, is whether these words will affect to the “what” and “when” to use PFP?. This question could contribute to the understanding of the purpose and the implementation of the PFP itself.

The approach of defining the purpose and usage of PFP could be developed by the answer on the “when” question, besides, the purpose of the PFP presented differently among each other’s definition. The CFP Board (n.d.-b), for instance, used the word “management” and Warschauer (2002) used the word “adoption”. However, both words represent the function of PFP that should be used for the current situation that already exists. In spite of this, other definitions that used the words “planning” and “preparing” are more related to implementing PFP for future events.

Furthermore, the implementation of PFP also will contribute to similar achievements, but yet the degrees of the achievement are different. This could answer the question of the degree to which PFP usage impacts on the individual. The definition by the CFP Board (n.d.-b) is broader, indicating that using PFP can contribute to the achievement of a personal life goal, possibly explaining any high achievements that an individual might have as a consequence of their PFP. Overall, most authors agreed that the benefit to apply PFP will contribute to the accomplishment of an individual’s financial goals and financial needs.

The differences between words that are used in these definitions, clearly, could be suggested because of differences in background, role and perspective. The practitioners

(client-oriented organisation) specifically show the usage of PFP for the current situation. The academicians, however, argue that the PFP is purposely implemented as a planning tool. This research, therefore, suggests the definition of PFP as an approach in the financial decision-making process that serves the achievement of an individual's personal financial goals.

Very few studies have looked in detail at the benefits of financial planning (Hanna, 2010). However, the benefit of PFP could be found addressed in some books. It has been argued that the understanding and use of PFP knowledge benefits the individual, especially during the decision-making processes of managing money (Madura, 2006; Gitman, Joehnk & Billingsley, 2010, p.2). The importance of PFP could be central to financial success by utilising limited financial resources to gain the maximum benefit, but different techniques of managing money would influence an individual's success and failure would result in managing their own limited financial resources (Frasca, 2008).

2.5.1.2 Major Areas of Personal Financial Planning

PFP is used to set an individual's personal financial plan. PFP is the specification of the approach and time target to achieve personal financial goals or financial needs. A personal financial plan should be flexible and allow access to individual current situations (Harrison, 2004) .

Most of the literatures (such as Chieffe & Rakes, 1999; Altfest, 2004) conclude that PFP covers six major areas. These can be summarised as:

1. Consumption-savings planning

2. Tax planning
3. Investment planning
4. Insurance planning
5. Retirement planning
6. Estate planning

Although the discussion brings us to the same meanings, the terms that are used are different. For instance, Altfest (2004) stated that risk management is considered the same as insurance management. Besides, liquidity management is considered as banking, money and credit management, and financing management covers personal loans and mortgages (Madura, 2006).

In particular, this thesis will concentrate only on the areas that relate to the formation of an emergency fund by individuals. The following section will discuss this in more detail.

2.5.1.3 Emergency Fund Behaviour: a Part of Personal Financial Planning

Personal financial planning has been defined before as mainly about planning for future events. Emergency funds have also previously been described as planning specifically for future emergency events. In relation to this, it could be suggested that emergency fund in behavioural perspective is a part of financial planning. Saving-consumption and investment planning, which are the main areas in financial planning, are also found when looked at from an emergency fund perspective.

It can be suggested that previous emergency fund studies discussions break into three main issues: (i) adequacy of levels of emergency fund holding; (ii) factors affecting the

adequacy of emergency fund; and (iii) categories of emergency fund. However, this chapter will focus on the discussion of (i) and (ii), with the discussion of (iii) being discussed in Chapter 3.

2.5.2 Previous Emergency Fund Studies

Previous studies have extensively discussed the adequate levels of emergency fund that individuals should hold. Unfortunately, beside no specific definition, the guideline on the exact amount of adequate emergency fund that should be held is also still unclear (Chang & Huston, 1995). Greninger et al., (1996) for instance, proposed that the emergency fund holding should be equal to three months' worth of monthly expenditure. Moreover, Chang et al. (1997) summarised the literatures on the emergency fund guidelines and proposed that the common suggestions were between three and six months of an individual's gross income. In addition, the adequacy of an emergency fund is measured by Anong & DeVaney (2010) with divided assets towards six months of household income. They then further argued that if the answer was positive, it is considered adequate.

Since young adults were claimed previously to lack adequate emergency fund holding (Chang & Huston, 1995; Huston & Chang, 1997; Chang et al., 1997; Bi & Montalto, 2004; Jean, 2005), it could be assumed that some young adults do not have an emergency fund due to lack of financial sources. As found by Bi and Montalto (2004), emergency fund formation requires the ability to save, rather than just the understanding that saving is important.

Previous studies (Chang & Huston, 1995; Chang et al., 1997; Huston & Chang, 1997; Bi & Montalto, 2004; Jean, 2005) also suggest that financial educators should encourage

this group by educating them of the importance of having an adequate emergency fund. Therefore, it is suggested here that understanding behavioural aspects of emergency fund formation among young adults could make the financial educator made aware of other possible factors that might help to educate this group more easily.

There have been no detailed investigations on what financial behaviour is involved in emergency fund provision in prior studies. Therefore, this research suggests that the concept of emergency fund could probably involve three behaviours simultaneously. Individuals may have saved, consumed/borrowed and investment planned together in one time. Although the beginning stage of literature in emergency fund (Johnson & Widdows, 1985; Chang & Huston, 1995; Chang et al., 1997; Huston & Chang, 1997) only mentions the involvement of savings behaviour, it is suggested that credit consumption behaviour is needed to be studied (Huston & Chang, 1997). Further, some studies (Hatcher, 2000; Worthington, 2004) counter the credit consumption instruments as part of emergency fund sources. But still not all studies discussed those behaviours simultaneously. The study by Bi & Montalto (2004) addressed that future studies on emergency fund should consider spending behaviour in response to an emergency, because the study only assumed that spending is static during an emergency. It suggested that consumption behaviour could be different during an emergency. It also suggested that future studies should consider the estimation of necessary living expenses in the event of an emergency. Throughout this thesis, then, the term emergency fund is used to refer to the fund that is allocated for emergency purposes, specifically including savings, investment or borrowing behaviour. Related to this, as has been said, it could be assumed that the young student adult group, which was mentioned as having fewer financial sources, might potentially display concurrently

these three behaviours when allocating their emergency fund: savings, credit consumption and investment behaviour.

Equally important, Chang & Huston (1995) argued that an individual preference to have an adequate emergency fund holding is a stronger factor than the ability to perform the behaviour. The importance of emergency fund holding is suggested to be promoted among young adults because it is highly influence by the ability to save, rather than only awareness about saving (Bi & Montalto, 2004). This means that the higher ability an individual has to accumulate surplus income, the more likely they are to have an emergency fund. Therefore, young adults should be educated from the beginning to save.

2.5.2.1 Factors Affecting to Emergency Fund Holding

Individuals are found to have more than one motive for saving, such as retirement, leisure or education (Canova et al., 2005; Fisher & Montalto, 2010), savings for major purchase (Xiao & Fan, 2002), or precautionary saving motives (Keynes, 1937). It has also been suggested by Lindqvist (1981) that the study of an individual's savings behaviour should take into account the reason why they are saving, as this may produce different findings. The main savings intention that was found relating to emergency fund is the intention mainly for emergency purposes. Equally relevant, the precautionary savings motive could be suggested to relate to the emergency fund concept. This is because precautionary savings is the behaviour that perform, for instance, to counter to the uncertain income risk (Skinner, 1988).

Age and educational background is found to positively relate to the ability of individuals to meet the three months emergency guideline (Bi & Montalto, 2004). In

addition, education levels are also positively related to having an adequate emergency fund (Hong & Kao, 1997; Bhargava & Lown, 2006).

Ethnicity is a factor in the level of emergency fund holding (Worthington, 2005). Bi and Montalto (2004) argue that White Non-Hispanic householders are more likely to meet emergency fund guidelines rather than Non-Hispanic Black householders.

Income is a factor in the creation of adequate levels of emergency fund holding, but the degree to which this is the case remains unclear. Bhargava and Lown (2006) identify that those who have higher levels of income shows less preparation for emergency fund because they already feel that they are financially secure. Similarly, Chang et al. (1997) also found that those expected to have a stable income in future are less prepared in terms of their emergency fund against those who expect a decline in future income. In contrast, Bi and Montalto (2004) argue that those who do not know their income in the future are less likely to possess the recommended level of emergency fund than those who have a guaranteed level of income in the next year. It was reported that about only 58% are likely able to have adequate emergency fund holding. However, Chang and Huston (1995) claim that income does not heavily contribute to the emergency fund formation.

Marital status is also found to relate to the ability to have adequate emergency fund holding. Married individuals were found to follow the adequacy emergency fund guidelines less (Bhargava & Lown, 2006). Unfortunately, a study by Chang and Huston (1995) argues that marital status does not contribute with significant effect to the adequacy of emergency fund holding.

Working status is found to relate to the amount of emergency fund formation; however this still remains unclear. Bi and Montalto (2004) found that part-time workers tend to have an inadequate emergency fund compared to full-time workers due to tighter household resources. Besides, those who are self-employed are more likely to have an adequate emergency fund, rather than wage earners (Bhargava & Lown, 2006; Rodriguez-Flores & DeVaney, 2007). However, Chang and Huston (1995) found that working status or sector does not affect the adequacy of emergency fund among individuals.

The effect of religion on an individual's financial knowledge was found to be insignificant (Watchravesringkan, 2008). However, young adults were found to consider religious factors as a source of financial knowledge before making any financial decisions (Falahati & Paim, 2011). In relation to this, according to Marks, Dollahite and Dew (2009), religious individuals could behave differently in terms of their financial behaviour. Their study found that an individuals' financial planning could relate to their religious beliefs, for example, they might put some portion of their income into charities. This suggests that the influence of religion towards an individual's financial behaviour might be occurred. Meanwhile, the impact of religion on savings behaviour among Malaysians remains unclear, suggesting a need for further studies (Haron, Sharpe, Abdel-Ghany & Masud, 2012).

2.6 The Theories

The emergency fund concept was previously discussed and suggested, in Section 2.5, which related to PFP area. Regardless of the lack of studies in this area, Altfest (2004) argued that the PFP knowledge is widely adopted by practitioners rather than

academicians. The author reviewed the literatures and found interesting evidence about the only two journals that have discussed the PFP discipline. These journals are the Financial Services Review and the Journal of Financial Counselling and Planning. It is argued that more contributions from academics are required given the significant lack of theoretical development in this discipline (Warschauer, 2002; Danes & Yang, 2014). Black, Ciccotello, and Skipper (2002) argue that these deficiencies are mainly due to a lack of research among scholars in this area.

This issue has been addressed by academics in a symposium convened by the U.S. Department of the Treasury and the U.S Department of Agriculture on behalf of the Financial Literacy and Education Commission (FLEC) in 2008. As reported by Schuchardt, Hanna and Hira (2009), the symposium recommended three areas of research priorities: behaviour theory, the consumer economic socialization and an evaluation of financial education programmes. Further, FLEC (2012) lists the research gaps in this area that need to be developed.

Nevertheless, current theories in PFP discipline are found lying covered from the economics, finance and psychology paradigm. However, the theories that will be discussed later in this thesis relate to the emergency fund concept. In addition, the theories that will be used by this research will also be also discussed later. Again, this research examines the application of these theories specifically relating to the young adult group.

2.6.1 Previous Theories Used in Studies of the Emergency Fund

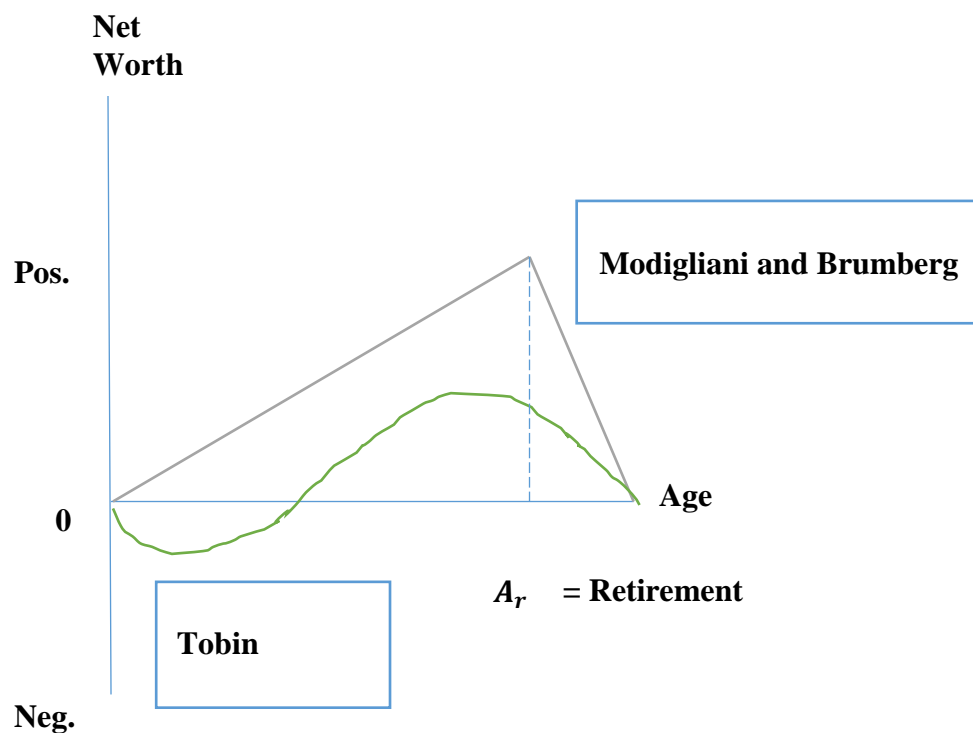
Discussions of the emergency fund in previous studies mainly use life-cycle theory and precautionary savings theories to develop conceptual frameworks. This section will

discuss these two main theories, relating them to previous studies on the emergency fund concept.

2.6.1.1 Life-Cycle Theory

The life-cycle hypotheses was proposed by Modigliani and Brumberg (1963). Their theory covered saving and consumption among individuals or customers in various age groups. The life-cycle hypotheses was originally formulated to suggest that individuals should prepare for uncertainties in their futures (Deaton, 2005). Wolff (1981) discussed the difference between the life-cycle model by Modigliani and Brumberg (1963) with Tobin's (1967) model of life-cycle. The differences between both models are presented in Figure 2.2:

Figure 2.2: Life-Cycle Models Comparison by Wolff (1981)



Source: Wolff (1981).

Wolff (1981) argues that Tobin's model assumes that an individual's net worth starts from a negative position because of their financial obligation and their likelihood of consuming debt at the beginning stage of life; fortunately, the individual's wealth will increase along with age. In addition, Modigliani and Brumberg's model assumes that an individual's wealth occurs from the saving of income. The main difference between these two models is their interpretation of the beginning stages of an individual's life of net worth. This is represented by the contradiction of these two assumptions of wealth holding at the beginning of an individual's life stage. Modigliani and Brumberg's model considers the saving behaviour from the first individual's stage of life, whereas Tobin's model argues that an individual's income is expected to grow, as individuals are consuming more in their early stage of life (Deaton, 2005). All in all, basically these models are related to consumption-saving behaviour.

2.6.1.1.1 Life-Cycle Model and Emergency Fund

Previous studies on the emergency fund (Johnson & Widdows, 1985; Chang & Huston, 1995; Huston & Chang, 1997; Rodriguez-Flores & DeVaney, 2007) were found to use the life-cycle hypotheses of savings by Modigliani and Brumberg (1963) when developing their conceptual framework. Factors such as age and income were tested to find their relationship towards adequacy level of emergency fund. The life-cycle hypotheses expectation is that individuals will increase their level of savings and planned-for future retirement savings when spending more than they are earning, and this behaviour is rational (Ottaviani & Vandone, 2011)

The age factor shows the relationship towards emergency fund holdings, individuals and households (Bi & Montalto, 2004). Chang and Huston (1995) found that as an

individual's age rises, so too does the probability of them meeting the emergency fund guidelines; and, younger individuals are less likely to meet the guidelines. However, different findings can be found with individuals in Japan who are less likely to follow the savings motives along life-cycle age, since high savings for retirement and precautionary motives were found to have become a priority among the young (Horioka & Watanabe, 1997).

In addition, older individuals prefer to hold an emergency fund that includes investment instruments (Anong & DeVaney, 2010). However, after considering the Malaysian customs (which will be discussed further in Chapter 3), young adults could have the possibility to hold precious metals, such as gold, from in heritage customs practice and this could be considered as one of the investment instruments. Therefore, the relationship between young adults towards savings and consumption behaviour if they have possibly inherited assets are still unclear. This is because Mountain and Hanna (2012) found that young adults with inheritance assets were more likely to increase their consumption and save less. However, they also argued that age does not have a strong effect on consumption choice, specifically to young people from a lower-education background, as proposed by the life-cycle model.

2.6.1.2 Precautionary Saving Motives

Modigliani and Brumberg (1954) suggest two motives for saving, which are “the precautionary motive” and “equity hold of assets for uncertainty.” They explain the precautionary motive as being the desire to prepare some savings through asset accumulation for meeting future emergency situations, which are unpredictable. It is further argued that the holding of any assets by having ownership of the assets, which

be durable goods for individuals (at least the cheapest), will help individuals meeting the financial needs during uncertain events; the real asset holdings. The theory indicated that individuals have accumulated assets purposely to face unexpected drops in future income (Friedman, 1957), or earning uncertainty (Guiso, Jappelli & Terlizzese, 1992).

2.6.1.2.1 Precautionary Saving Motives and Emergency Fund

A study by Anong and DeVaney (2010) was found using the precautionary savings motive in developing their conceptual framework. Their study is to purposely test precautionary savings to measure the adequacy of emergency fund holdings. There are also previous studies on precautionary savings; however, these studies are from a different perspective. For example, studies such as (Kimball & Weil, 2009; Lee & Sawada, 2010; Mishra, Uematsu & Powell, 2012) focus more on the factors that affect or relate to precautionary savings behaviour rather than details of the emergency fund holdings, such as the study by Anong and DeVaney (2010).

Self-employed individuals with uncertain future income and more educated persons are reported by Anong and DeVaney (2010) to be more likely to have an adequate emergency fund. Besides, this study also found that risk tolerance shows a weak relationship towards precautionary savings motives.

2.6.2 Current Research Theory to Be Used: Theory of Planned Behaviour

The need for modelling in behavioural finance studies was mentioned by Campbell (2006). It is further argued that the behavioural finance theory describes the choices households currently make, whereas standard finance theory describes the choices that maximise the household welfare. Previous studies on the emergency fund mainly focus

on the traditional finance paradigm rather than behavioural finance aspects. However, factors such as norms and economic conditions should also be considered when looking to study financial behaviour (Greninger et al., 1996). This is because the author argues that financial experts need to be aware that a “typical” family/individual does not really exist, and diversity in financial behaviour could occur over the course of life-cycle. Besides, Fisher (2010) explained that life-cycle hypotheses and precautionary motives are still unable to provide a deep understanding of savings behaviour for emergency motives. It also agreed by others, such as Wärneryd (1989), that life-cycle theory is inadequate in explaining savings behaviour. Since it suggests that people tend to save less and borrow more, especially young adults that expect to use their future income to cover their debt. In addition, those theories become the limitation in the previous studies on emergency fund to deal with latent variables (unobserved) because of the data used (Anong & Fisher, 2013), such as using secondary data instead of primary data.

Therefore, this thesis applies the modified theory of planned behaviour as part of the conceptual framework, which will be discussed further in Chapter 4. The theory of planned behaviour could be studied to enhance understanding toward individuals’ financial behaviour because it is designed to predict and understand human behaviour (Xiao, 2008, p.69). By understanding human financial behaviour better, the education programme provided by financial educators could be developed and designed to meet the behavioural change orientation (Xiao, 2008, p. 70). The author further argued that saving behaviours, for example, could be explained in two different perspectives: in which saving regularly becomes behaviour, whereas the increase of the savings becomes an outcome.

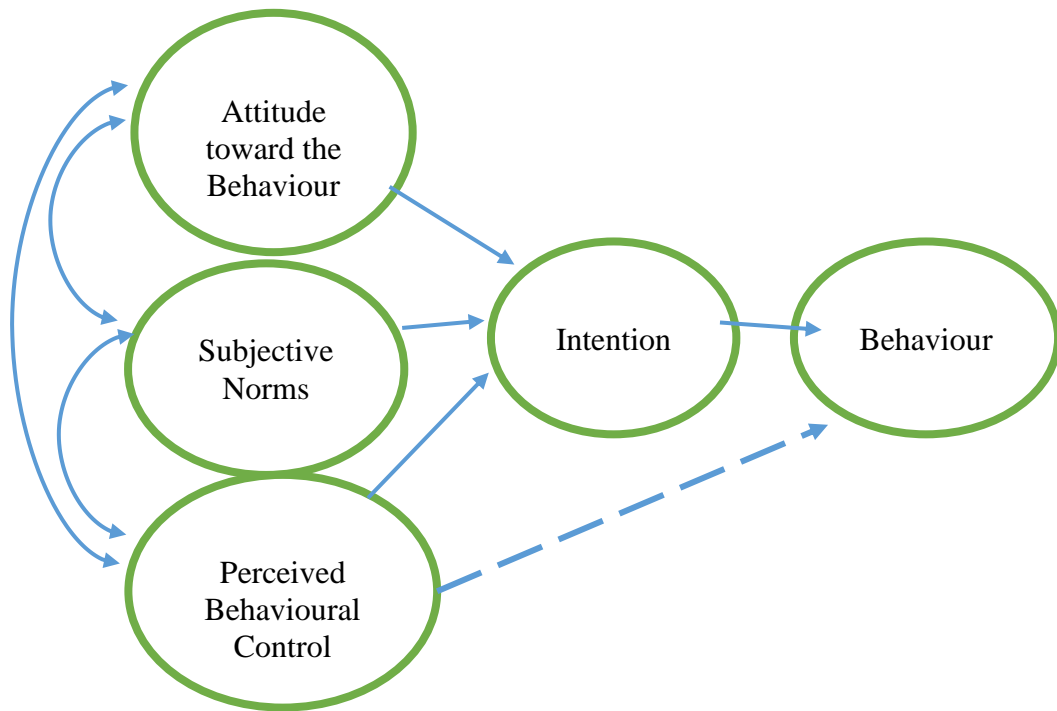
The theory of planned behaviour is the extension of the theory of reasoned action by Ajzen and Fishbein (1980). Ajzen (1991) explained “according to the theory of planned behaviour, performance of behaviour is a joint function of intentions and perceived behaviour control.” That this theory further suggests three conceptual independent determinants of intention: (i) attitude towards behaviour; (ii) subjective norm (refers to the perceived social pressure to either perform or not perform the behaviour); and (iii) degree of behaviour control. This theory is illustrated in Figure 2.3.

The difference between the theory of reasoned action and the theory of planned behaviour is the perceived behavioural control. There are some relations on the motivations to perform such behaviour and the ability of the individuals to perform it that indicates the achievement of the particular behaviour (Ajzen, 1991). It is further argued that this theory is relevant to predicting the understanding of the specific behaviour. This research, therefore, suggests that this theory could be suitable to understanding the emergency fund behaviour that without doubt is specifically prepared for emergency purposes. This is because, according to Ajzen (1991), the theory of planned behaviour was designed to predict and explain human behaviour in specific contexts.

Recently, the theory of planned behaviour has received vast attention in the behavioural finance studies. It has been tested in many financial behaviour studies, such as investment behaviour (East, 1993); savings and future oriented financial behaviours (Soyeon Shim, Serido & Tang, 2012); service switching behaviour (Bansal & Taylor, 2002); and credit counselling client behaviour (Xiao & Wu, 2006). This theory was also tested on saving behaviours among young adults by Shim, Serido & Tang (2012).

However, those studies were primary carried out in the contexts of the United States. Moreover, these studies are not focused on specific savings intention, i.e. emergency fund. According to Xiao (2015), it also suggested that the theory could help to understand the financial behaviour among individuals.

Figure 2.3: Theory of Planned Behaviour



Source: Ajzen (1991).

2.6.2.1 Theory of Planned Behaviour and Emergency Fund

There is less discussion about the relationship between attitudes, subjective norms, perceived behavioural control and intention towards emergency fund behaviour. Therefore, this research will predict the possibilities of the factors by using them in constructing the conceptual models later in Chapter 4. However, the following section will discuss the related literature on the above factors.

2.6.2.1.1 Savings and Borrowing Consumption's Attitudes for Emergency

According to Ajzen (1991, p.188), the attitude toward behaviour is referred to as “the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question.” Bi and Montalto (2004) argued that an individual's attitude towards borrowing to cover living costs when income is cut is not significant. However, it is argued further that the availability of credit instruments relates to less preparation for an emergency fund. This indicated that individuals are more probably financially literate. In addition, The positive attitude towards credit contributes to less savings for an emergency fund (Bhargava & Lown, 2006). This may because individual think that they will still have possibility of alternative of money if there is emergency need. Some studies (such as Kimball & Weil, 2009; Lusardi, 2000) were found not to measure attitudes towards savings for emergency directly. The attitude towards risk was used to explain the savings for emergencies, such as precautionary savings. The attitude was found to directly influence saving behaviours among individuals (Garcia, Barros & Silvestre, 2011).

However, the attitude towards emergency fund formation among young student adults as yet remains unclear. Studying it is important to gain an understanding of their attitude, as well as to well educate the debt knowledge among them (Norvilitis, Szablicki & Wilson, 2003).

2.6.2.1.2 Subjective Norms and Emergency Fund

Ajzen (2011, p.188) defines the subjective norms as referring to “the perceived social pressure to perform or not to perform the behaviour.” The relationship between subjective norms towards emergency fund behaviours among young adults is relatively

unexplored. However, from the literature in section 2.3.1.3, it can be argued that the social factors that contribute to a young adult's financial behaviour exist. Factors such as family and peers are found to affect financial behaviour among young adults. Future study is required to understand the relationship between these social pressures towards specific financial behaviour among young adults (Shim et al., 2012).

In addition, this research suggests that culture is also a predictive factor that contributes to emergency fund behaviour. This is because each culture has a unique character (Bakir, Rose & Shoham, 2006). For example, Hong & Kao (1997) found that Asian-Americans have more adequate levels of emergency funds compared to other ethnic groups in America. Although they live in the same country, then, culture and custom influences the financial behaviour of each. In the context of Malaysia, particularly, it is widely practiced to hold some specific assets such as gold in order to have quick cash during an emergency event. It could be predicted that Malaysian culture may contribute to individuals performing emergency fund behaviour. The discussion on the culture in Malaysia contexts towards this prediction is shown later in Chapter 3.

2.6.2.1.3 Perceived Behaviour Control and Emergency Fund

Perceived behavioural control “refers to people's perception of the ease or difficulty of performing the behaviour of interest.” (Ajzen, 1991, p.188). In other words, Ajzen (2002) argues that it is “focused on the ability to perform a particular behaviour.” It is further argued that the resource and the obstacle that are faced by individuals are unimportant, but what is important is the belief for individuals to perform the behaviour. Besides, perceived behavioural control can represent internal or external factors (Ajzen, 2002).

No evidence could be found in a discussion of the relationship of perceived behaviour control towards an emergency fund. However, Soyeon Shim et al., (2012) have argued that there is a significant relationship between perceived behaviour control towards general savings behaviour.

2.6.2.1.4 Intention and Emergency Fund

Ajzen (1991, p.181) defines that “intention is to perform a given behaviour. Intentions are assumed to capture the motivational factors that influence a behaviour; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behaviour.” From a savings perspective, Wärneryd (1999) stated that saving motives are one form of intention which have been found to affect saving behaviours. Rabinovich and Webley (2007) argued that intentions contribute to successful savings behaviours.

Although motive to save was previously mentioned to contribute to the success of saving behaviour, Huston & Chang (1997) argued that the intention alone did not contribute to the probability of individuals to actually having sufficient reserves for emergencies. In another study by Rabinovich & Webley (2007), it was found that there is relationship occurring between intention and savings. However the causal effects are still unknown. Therefore, there is less evidence to explain the cause and effect of intention towards the emergency fund behaviour.

2.7 Previous Emergency Fund Studies: Contextual Background

It can be concluded from previous discussions that there is a research gap in terms of the theory that needs to be studied and this gap could also be found when looking from the background context of the previous studies. The concept of emergency fund that has

been outlined earlier relates to an individual's preparation towards emergency situations, such as income shock. The issues, for example, unemployment, medical bills and any expenses that result in the need for quick cash are also understood as emergency situations. In the same way, it can be predicted that different institutional settings provided by government may relate to an individual's behaviour towards preparing for emergency needs. These include the benefits provided to citizens that reduce future financial worries and can be dubbed institutional incentives. All studies on emergency fund so far, however, less addressed the fact that the welfare regime used by the government may influence the emergency fund formation behaviour. Therefore, very little attention has been paid to this concern.

This research gives an account of the rationale to study emergency fund in the Malaysian context. Nevertheless, the main purpose of this section is not to focus on the comprehensive discussion with regards to the theory of contextual regime differences as it is beyond the scope of this research. The focus of this section is discussing the differences of the welfare system as practiced among some countries around the world. As it is believed that individuals were preparing for future emergency expenses if there was uncertainty, especially in their future income or job status. Social welfare provided by government may at least be shaping their preparedness towards future income shock.

There are various different welfare systems used by countries in this world. Aspalter (2006) summarises some welfare systems that are used, namely Social Democratic welfare regime, Corporatist/Christian Demographic welfare regime, Liberal welfare

regime and Conservative welfare regime.¹ Table 2.3, adapted from Aspalter (2006), shows the difference of welfare systems among countries.

According to Aspalter (2006), overall, it could be found that the public welfare distribution by social democratic welfare system regime countries and Corporatist/Christian Democratic welfare regime countries are quite widely distributed. Likewise, Liberal welfare regimes did provide various benefits but were still targeted and had limited distribution. However, Conservative welfare regime countries were found lacking in provision of basic benefits, such as healthcare and education benefit. Also, the available benefits are not widely and more selectively distributed. However, the detailed explanation of the table will not be discussed, as it is not the objective of this research.

As noted earlier, the previous studies that have focused on emergency fund have mainly been undertaken in countries such as the U.S. and Australia, which operate the Liberal welfare regime model (See for example, United States: Anong & DeVaney, 2010; Bi & Montalto, 2004; Chang et al., 1997; Chang & Huston, 1995; DeVaney, 1995; Hanna & Wang, 1995; Hong & Kao, 1997; Huston & Chang, 1997; Johnson & Widdows, 1985; Joo & Grable, 2006; Montalto, 2002; Rodriguez-Flores & DeVaney, 2007, Babiarz & Robb, 2014 and Australia: Worthington, 2004).

¹ From the summaries, it could be found that the examples of countries practicing Social Democratic Welfare regimes are Sweden and Norway. Countries such as Germany, France and Belgium adopted a Corporatist Democratic welfare model. Next, Liberal welfare model are practiced in U.S., Canada, Australia and the United Kingdom. Moreover, Japan, South Korea, China, Malaysia and Singapore were reported to be using a Conservative welfare model.

In the Liberal welfare system, the government usually provides various benefits to the citizen, such as unemployment benefits, child support benefits and disaster assistance. Some benefits, such as income support programmes, have different categories depending on their criteria. Milan (2004), for instance, explains five types of benefits provided by some developed countries that basically serve unemployed people (i.e. unemployment insurance, unemployment assistance, unemployment insurance savings accounts, severance pay, and public works programs).

Table 2.3: Overview of Benefits in Welfare Systems among Countries

	Social Democratic welfare regime	Corporatist/Christian Democratic welfare regime	Liberal welfare regime	Conservative welfare regime
The underlying logic of welfare provision-social welfare is understood as representing:	- Social rights based on citizenship (including social insurance, social services and public employment)	- A right to social insurance, plus charity welfare provision	- A limited right to charity welfare provision and social insurance provision	- A right to public investment in social development, plus a moderate right to social security and/or public charity welfare provision
Leading instruments in social welfare policy	- Universal social security system - Public social services - Public employment - Social transfers	- Occupational social security systems - Preferential treatment of special interest groups - Corporatism in social service provision (NGOs, Church) - Social transfers	- Means-tested welfare benefits - Private savings and insurance	- Occupational social security systems - Preferential treatment of special interest groups - Employment-based welfare and social security programmes (including mandatory savings)
The focus of social policy on the role of:				
- the individual	- strong	- weak	- strong	- weak
- the family	- weak	- strong	- weak	- strong
- the market	- weak	- weak	- strong	- strong
- the state	- strong	- strong	- weak	- weak
Welfare states that belong to this <i>ideal-typical</i> regime type are, for example:	Sweden, Norway (partly also Finland and Denmark)	Germany, Austria, France, Belgium (partly also Italy and Spain)	US, Canada, Australia, New Zealand (partly also the UK)	Japan, South Korea, China, Hong Kong, Taiwan, Malaysia and Singapore

Sources: Aspalter (2006, p.299).

In the U.S., for instance, citizens are provided with unemployment benefits (i.e. California Unemployment Insurance) which could help those who are suddenly unemployed to survive in their daily expenses (Benefits.gov, n.d.). The United Kingdom is one of the European Welfare States in which the government undertakes “the responsibility for providing for the social and economic security of its population” (Cousins, 2005, p.4). Relating to that, the United Kingdom likewise practiced the benefit system by providing benefits to their unemployment citizens such as Jobseekers Allowance (JSA), along with other allowances, such as child benefits and five more categories of benefits to be claimed (Gov.UK, n.d.). In the same way, in Australia, social welfare is provided in such big volume by the government. Many public programs were designed which aim to help socioeconomically disadvantaged households, including income support, unemployment, dependent spouse rebates and allowances, disability and pension benefits, child support and endowment, concessional benefits and health support (Worthington, 2004; Australia Government, 2014).

Since these benefits were introduced, unemployment benefit was found to help individuals and households during unfavourable events such as income shock (Haan & Prowse, 2015). Rationally, they might have fewer tendencies to prepare for emergency if they feel secure and financially guaranteed. Furnham, (1985) argues that this is one of the reasons that individuals think that saving money is pointless. In addition, those who are entitled to receive welfare are mostly found to have no savings (Okech, Mimura, Mauldin & Kim, 2013). Likewise, in Australia, the unemployment assistance programme offered by the government failed to encourage people to save because individuals felt that they have an income guarantee and a smooth consumption during unemployment (Milan, 2004).

However, benefit systems alone cannot provide the reasons for not preparing for emergency needs. Other factors can also shape the behaviour. Japan's welfare model was debatable in the literature. Although Aspalter, (2006) listed Japan as having Conservative welfare regime, Esping-Andersen, (1997) argued that Japan has hybrid welfare regime (Conservative and Liberal), while Ferragina, Seeleib-Kaiser & Tomlinson, (2013) argued that Japan is more liking practicing Liberal and Democratic welfare regime. It is difficult to clarify. In Japan, benefits such as unemployment protection and family insurance are provided by the government (Ferragina, Seeleib-Kaiser & Tomlinson, 2013). Interestingly, it was found that people in Japan put emergency savings as one of their highest priorities, even though a welfare system is in place (Horioka & Watanabe, 1997). Young adults in Japan were the group that were more likely to save for precautionary reasons than older generations (Zhou, 2003).

Furthermore, the Conservative welfare regime is more synonyms with East Asian countries. The distribution of benefits were found lacking in term of immaterial resources, such as health and education, besides focus on interest for certain specific groups only (Aspalter, 2006). In China, the emergency saving motive was the main motive of savings, along with children education and retirement (Yao, Xiao & Liao, 2014). It is found in their study that the young adult group (40 years old and below) were the second highest group to save for emergency. There is some evidence of planning for emergencies in Pakistan. The study by Lee & Sawada, (2010) found that those that had liquidity constraints and future uncertainties (especially those that have limited access to formal credit markets) tend to save more for emergencies and behave more prudently, even though they were included under liquidity constraint groups.

However, Korean people were reported by Hong, Sung & Kim (2002) to have less savings for precautionary motives, rather than saving for children and retirement.

To date, lacks of studies into emergency fund have been carried out in countries that use conservative welfare regimes, including Malaysia. Although, a number of similar studies on preparation towards emergency needs among individuals have been carried out in the related countries, the scope of the studies were limited in terms of discussing the emergency fund concept as a whole. As Malaysia also uses a Conservative Welfare regime, it could be argued that by studying the Malaysian context, this research can make a contribution towards current literature in emergency fund. Relating to this, the study on savings among those in developing countries that focuses on small groups could help to generate more understanding of savings behaviours among individuals which found not affected by temporary or permanent income even though for cover the income shock (Deaton, 1989).

In Malaysia there are fewer benefits of limited access to citizens. Certain citizens who have to fulfil criteria, such as government servants, are prioritised for benefits such as free medical care in government hospitals. The Malaysian government currently does provide initiatives to the citizen (1Malaysia Products, 2015), but the monetary aid is targeted at specific groups. The groups include, for example, low-income senior citizens, children, disabled persons, single mothers and widows of soldiers and policemen. However, these groups only received between RM100 (£15) and RM450 (£69) per person or household per month, which was lower than the minimum salary in Malaysia of RM900 (£137). In addition, there are no such unemployment benefits, child support benefit and others benefits that might be found in other countries. Apart from

the study that has been carried out by the Institute for Research in Youth Department, Malaysia (IPPBM) in 2011², which shows the percentages of worried young adults' problems related to preparation on emergency needs, the emergency fund research in Malaysian context could be argued to be relevant. Analogously, understanding young adults groups that successfully perform emergency fund behaviour may provide some contribution for the financial planning research area.

2.8 Chapter Summary

Financial behaviour was found to be one of the important topics that need to be studied, as it involves the complexity of human actions. Positive financial behaviour among young adults could contribute to long-term life effects, as well as negative financial behaviour such as high indebtedness at an early young age. Encouraging young adults to prepare for emergencies was addressed by most previous studies. However, the young adult group examined in previous studies on financial behaviour were found to be influenced by many factors contributing to shaping their financial behaviour. The effects of these behavioural factors towards emergency fund behaviour are still relatively unknown.

It is these gaps that this thesis addresses. Most previous studies on emergency fund exclusively focus on the observed factors of the emergency fund by adopting two main theories as part of their conceptual framework, which are life-cycle hypotheses and precautionary savings. Both theories assume that individuals are directly measured by these factors, ignoring potential unobserved or latent factors that may impact on emergency fund behaviour. The data that has previously been used (i.e. secondary data)

² See Section 1.3

in the emergency fund studies was found to reflect the barrier to look at the behavioural perspective of emergency fund, although behavioural perspective could contribute to better understand an individual's true behaviour towards preparing for an emergency fund (Joo & Grable, 2006).

The rationale of studying emergency fund in Malaysian contexts was discussed in this chapter. Since previous studies on emergency fund were done in different welfare systems regimes, this research finding, therefore, could contribute to the current literature.

CHAPTER 3

LITERATURE REVIEW 2: THE CATEGORIES OF EMERGENCY FUND

3.0 Introduction

The previous chapter focused on the concept of the emergency fund. The purpose of this chapter is to review the literature that deals with emergency fund categories. The type of financial instruments that are included in the emergency fund categories will also be discussed. It then goes on to examine the potential additional financial instruments that could be found relevant to this research context.

3.1 Emergency Fund Categories

The category of emergency fund was classified by Johnson and Widdows (1985) as being according to their degree of liquidity. The study categorised three major criteria, namely quick fund, intermediate fund and comprehensive fund. Other studies such as Huston & Chang (1997) and Bhargava & Lown (2006) further added other financial instruments which may be suitable for their context of study. The categories of emergency fund were also found to be different among some studies. Bi and Montalto (2004), for instance, used monetary fund instead of quick fund. Further, after 2007, the trend in emergency fund studies, such as Rodriguez-Flores & DeVaney (2007) and Anong & DeVaney (2010), were changed to add another category of emergency fund: subjective fund. The subjective fund was measured using the question in SCF (Survey of Consumer Finances) 2007, which is, “about how much do you think you (and your family) need to have in savings for emergencies and other unexpected things that may come up?” This research, therefore, will follow the categories of emergency fund used by Huston and Chang (1997), with added another financial instrument in the

intermediate category fund, which is gold. This will be discussed further later in this chapter. A summary of previous studies on emergency fund criteria is presented in Table 3.1:

Table 3.1: Summary of Example Previous Research on Emergency Fund Classification

Previous Studies	Categories of Fund	Elements
Johnson and Widdows (1985)	Quick fund	Quick emergency fund, which consists of checking and savings accounts.
	Intermediate fund	Intermediate emergency fund, which consists of the value of certificates of deposit and savings certificates.
	Comprehensive fund	Comprehensive emergency fund, which includes the value of stocks and bonds.
Huston and Chang (1997)	Quick fund	Assets held in savings, checking and money market accounts.
	Intermediate fund	Quick assets, plus CDs and

Previous Studies	Categories of Fund	Elements
		savings certificates.
	Comprehensive fund	Intermediate assets, plus the value of stocks and bonds.
Bi and Montalto (2004)	Monetary assets	Monetary assets including assets held in checking, saving, brokerage accounts and money market funds.
	Comprehensive assets	Comprehensive assets include monetary assets plus investment assets held in certificates of deposit, mutual funds, stocks and bonds.
	Subjective fund	Subjective measure of emergency funds based on what respondents believed were an adequate amount of liquid assets for them to have available in case of emergencies.

Previous Studies	Categories of Fund	Elements
Bhargava and Lown (2006)	Quick fund	Quick emergency fund included checking, savings, and money market accounts.
	Intermediate fund	Intermediate emergency funds included the quick measure plus certificates of deposit.
	Comprehensive funds	Comprehensive fund included intermediate funds plus stocks, bonds, and mutual funds.
Rodriguez-Flores and DeVaney (2007)	Quick fund	Quick emergency fund includes checking, savings and money market accounts.
	Comprehensive fund	Comprehensive emergency fund includes the value of stocks, bonds and mutual funds (but not retirement accounts) with the accounts that are considered as

Previous Studies	Categories of Fund	Elements
		intermediate emergency fund.
	Subjective fund	Subjective measure of emergency fund based on what respondents believed were an adequate amount of liquid assets for them to have available in case of emergencies.
Anong and DeVaney (2010)	Quick fund	Saving and checking accounts, money market accounts and call accounts.
	Comprehensive fund	Comprehensive fund includes intermediate fund (quick funds plus certificates of deposit) plus stocks, bonds and mutual funds that are not held in retirement accounts.
	Subjective funds	Subjective measure of emergency funds based on what

Previous Studies	Categories of Fund	Elements
		respondents believed were an adequate amount of liquid assets for them to have available in case of emergencies.

Sources: Johnson and Widdows (1985), Huston and Chang (1997), Bi and Montalto (2004), Bhargava and Lown (2006), Rodriguez-Flores and DeVaney (2007), Anong and DeVaney (2010).

Some previous studies also measured the adequacy level of emergency fund holding based on these categories. Bi and Montalto (2004) have argued that there might be differences between individuals on the appropriate level of an emergency fund. For instance, a subjective fund is measured depending on the response from the respondent on the adequate amount of liquid assets that they believed to be enough for them (Rodriguez-Flores & DeVaney, 2007; Anong & DeVaney, 2010).

Although the financial instruments were listed according to the emergency fund categories, previous studies have not dealt with the type of financial sources that individuals used to allocate their emergency fund. This research later seeks to obtain data that will help to address this research gap.

3.1.1 Credit Instruments and Emergency Need

The study on emergency fund by Worthington (2004) used different types of financial instrument than in Table 3.1. The study included credit instruments as their dependent variables, such as loans from family and friends, credit cards, welfare organisations and

financial organisations. The result shows that emergency fund levels rise only through own savings and loans from deposit-taking institutions in Australia.

It was found that individuals might have to borrow for emergency needs, but to have no cost of borrowing during the emergency could be beneficial (Hatcher, 2000). Therefore, by including some credit instruments into the same category of emergency fund, the behaviour of the emergency fund would be different. This is because Xiao et al. (2004) argued that the behaviour towards saving and credit are different. Bi and Montalto (2004) have argued that individuals who had access to credit via the retirement or pension benefit have less savings for emergencies because they know that they are able to have an alternative when need comes. Besides, they further argued that the availability of home equity loan contributes to two different findings. Individuals have fewer savings for emergencies when they have credit abilities. However, other individuals would also use the credit loan to increase their savings for emergency fund.

3.1.2 Factors Related to Emergency Fund Categories Holdings

The selection of the comprehensive fund holding among individuals is found to relate to their age. Those who are older are more likely to hold a comprehensive fund than those who are younger (Anong & DeVaney, 2010). In addition, they further argued that those who seek financial advice from professionals are more likely to choose a comprehensive fund and are more able to achieve the adequacy level of this fund.

Bi and Montalto (2004) argue that there is less of a relationship between income and comprehensive emergency fund holding. They further argue that because the comprehensive fund is including the elements of investment assets, the results may differ among other funds.

Job sectors are also found to indicate the adequacy of quick fund and comprehensive fund among individuals. In their study, Anong and DeVaney (2010) identify that those in the manufacturing industry have a less adequate comprehensive emergency fund due to instability of their job positions compared to those in financial, insurance and real estate positions. They also argue that 47% of self-employed people in their samples are more likely to hold a quick fund than those that work for someone else.

Some studies (Bi & Montalto, 2004; Rodriguez-Flores & DeVaney, 2007) found that race was not a predictor of adequacy of subjective emergency fund holding among individuals. However, it was found in these studies that white households might hold more adequate quick and comprehensive funds when compared with non-white households.

In addition, availability and access to credit cards also contributed to savings for emergency fund. Bi and Montalto (2004) argued that individuals tend to have fewer savings for an emergency fund; credit limit positively related to the level of liquid or comprehensive assets. Moreover, religious factors may contribute to emergency fund categories, which could be predicted to relate to core financial instruments selected by some individuals (Worthington, 2004).

3.2 Financial Instruments for Emergency Fund in the Malaysian Contexts

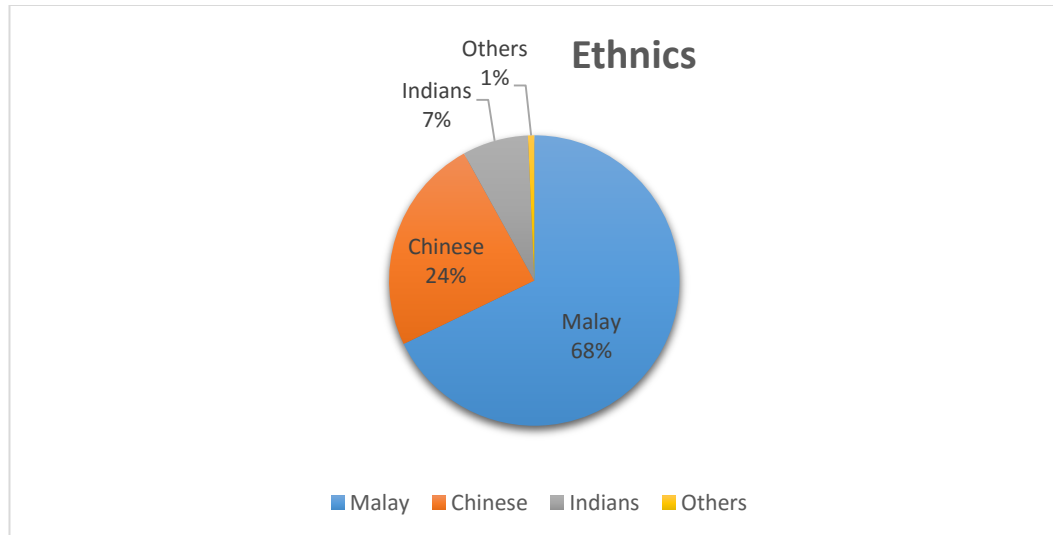
Previous sections have discussed the financial instruments of different emergency fund categories. This section will focus on the financial instruments that may be relevant to include in addition to current literature based on this research context, which mainly focuses on Malaysia. Elements such as customs and culture may be pertinent. In this research, gold will be added as an additional instrument into one of the categories. This

section, therefore, begins with an explanation of the Malaysian background before going on to discuss the relevant literature.

3.2.1 Malaysian Background

The Department of Statistics, Malaysia reported that in 2010 the total population of Malaysia was around 28.3 million and consisted of different ethnic groups. The predominant ethnic group in Malaysia is Malay (67.4%), followed by Chinese (24%), Indian (7.3%) and others (0.7%). Despite such a multiracial environment, cultural differences are well respected. It is argued that this contributes to the peace, respect and understanding shown by individuals in Malaysia, as interracial marriage is widely accepted (Jo-Pei, Buharuddin, Juhari & Krauss, 2008; Nagaraj, 2009).

Figure 3.1: Ethnic Groups in Malaysia, Shown in Percentage

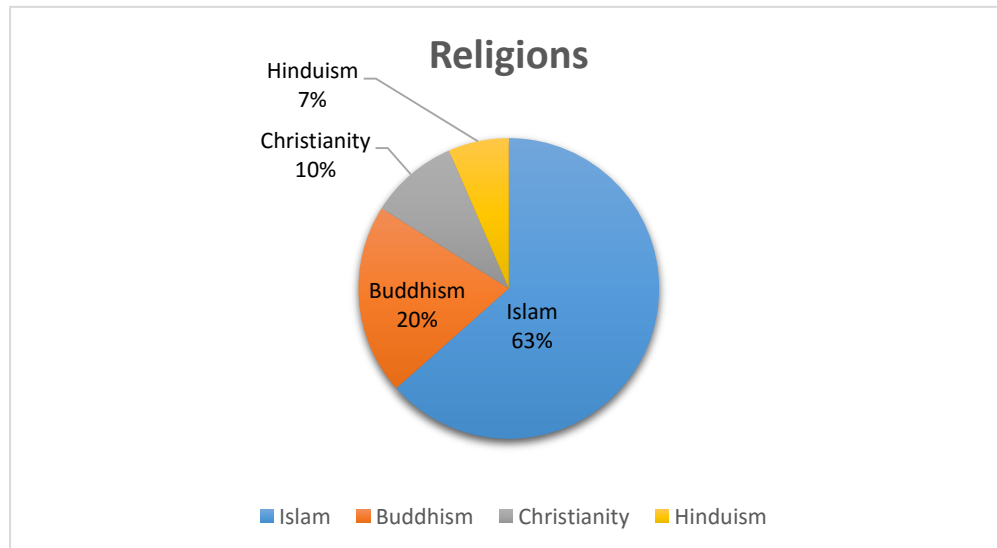


Source: Department of Statistics, Malaysia (2010).

Islam is the official religion in Malaysia, however, as a multi-racial nation, other religions are free to practice (Aziz & Shamsul, 2004; Fernando, 2006). The other

widely-practiced religions in Malaysia are Buddhism (19.8%), Christianity (9.2%) and Hinduism (6.3%), which are presented in the pie chart below:

Figure 3.2: Percentage Distribution of the Population by Religion, Malaysia 2010



Sources: Department of Statistics, Malaysia (2010b).

The emergency fund financial instrument preferences among young student adults in Malaysia are relatively unclear. Some studies (i.e. Falahati & Paim, 2011; Haron et al., 2012; Rahim, Jusoh & Samad, 2012) were found to mention savings or investments that were purposely for emergencies, but the instruments were not mentioned in detail. Fortunately, there is a financial instrument that historically has been widely chosen by Malaysians to survive during an emergency. Gold has been tracked in the literature as a financial instrument for emergencies. However, there is less evidence that could be used to clearly indicate that young student adults in Malaysia hold gold as part of their emergency fund instruments, mainly due to lack of studies that engage with this fact. The next section will discuss the studies that relate to the behaviour of holding gold purposely for emergency situations.

3.2.1.1 Gold as a Financial Instrument in Emergency Fund among Malaysians

There has been little attention paid to the phenomenon of holding gold in Malaysia. Thereupon, the intention of holding gold, which is indirectly mentioned by previous studies, shows a relationship to savings or investment behaviour for emergency purposes.

Gold is usually worn as jewellery among women (Talib, 2000) while some hold it as another form of money, which is Gold Dinar (Kameel, Meera & Larbani, 2006). Since Malaysia a multiracial country with different cultures, it shows the different reasons that individuals might choose to hold gold. Furthermore, Banks (1976) identifies that in Malaysia, in Malay ethnic tradition is for parents to pass gold jewellery through an inheritance to their child, usually to their daughter. Banks further explains that this is because parents believe that the jewellery could be used as security for a woman if her husband ever left her.

In Malaysia, it is a current trend to use Gold Dinar as wedding dowry (Brau & Woller, 2004). Additionally, in Islamic teaching, it is compulsory for a man to give *Mahr* (a marriage gift) in the wedding ceremony (Abdul Hak, 2012). In Malaysia, it became a normal culture for the husband to give *Mahr* to his wife, however, it has also become a culture for the wife to receive a dowry (wedding gift), which usually consists of gold. Reddy (1995) argues that one of the ethnic traditions in Malaysia, which follows the tradition of Islam in preparing *Mahr* for a wedding ceremony along together with dowry, is known as *Bajaus*; in which the dowry usually consist of clothes and gold. He also explains that an ethnic culture is for the need to give additional special gold, known as “wedding gold”, to the women during the ceremony. It is also widely practiced by

Malay's ethnics that the jewellery or "wedding gold" gift and will remain the property of the wife even if the couple are divorced (Connor & Samuel, 2001).

Other ethnicities in Malaysia have shown a preference for holding gold, in particular Indians and Chinese. Finnane (1996) argues that the wearing of gold jewellery by Chinese ethnics, such as "Xunwu" descent, is really important because it represents the status of an individual's life. Additionally, Indian culture also shows the importance of gold jewellery to their women. Talib (2000) reveals that in Indian culture it is a traditional custom to give gold jewellery to daughters as a wedding gift because the daughters need to wear it when they visit their in-laws.

It can be seen, then, that there are cultures in Malaysia in which individuals will receive gold as part of an inheritance or as a wedding gift, as well as being bought as personal jewellery by many. Unfortunately, studies specifically focusing on the relationship between the young adult group and gold as an emergency instrument remain scarce. Even in these ownership situations, one of the reasons for owning gold is for security during an emergency if they are divorced. It could be, then, assumed that an individual's intention in holding the gold is also related to the emergency purpose.

Nevertheless, savings and consumption behaviour among individuals who have inherited wealth in Malaysia has not yet been widely explored. This is because the studies on savings and consumption on inherited wealth have received relatively little attention (Zagorsky, 2012). In their study, the data was used from the National Longitudinal Survey of Youth 1979 cohort (NLSY79), based in the United States. This study discussed the savings behaviours towards inherited wealth. The study found that

individuals with inherited wealth have fewer savings and tend to consume half of their inherited wealth.

3.2.1.1.1 Characteristics of Gold

Rather than cash, having assets could be helpful in serving benefits to individuals during an emergency. This research suggests that gold could be agreed to this criterion. There is also a study that supports the findings on the efficiency of a portfolio which includes gold mining industry shares (Sherman, 1982) and equities from precious metal firms (Conover & Jensen, 2009). Sherman (1982) reports that, “the price of gold might be expected to rise and counterbalance the price depreciation of the growth stocks.” The study also reported that the portfolio that contains gold is less volatile if it is combined together with stocks and bonds. This is because the gold correlation is nil and shows independence; also, there is discharge from a long interest rate. By including gold, the risk in an investment portfolio could be suggested to reduce, since it also had liquidity asset characteristics which are more liquid than stocks and bonds (Jaffe, 1989) and could enhance investment strategy (Conover, 2009).

Moreover, Kameel et al., (2006) argue that although gold has an intrinsic value like other commodities, most individuals are obsessed on owning it. It has been a metal in high demand throughout history. They also argue that the use of gold is very common as a medium of inheritance, which is shown to be the case in the cultures of some countries. They further identify that, to a certain extent, the use of gold is also associated with the life status or class. This finding could be suggested to relate to the Malaysian culture, as is indicated previously.

Culture, then, was found to relate to an individual's financial behaviour (Grable, Park & Joo, 2009). Their study argued that the direct effect towards financial behaviour was unknown because the study found that culture was mediating the effect of financial knowledge on financial behaviour. In fact, previous sections in this thesis have noted that the selection of gold could be predicted because of normative cultural elements. This could be because, indirectly, reasons for choosing to hold gold were purposely to cover future emergency needs. However, the lack of empirical research on this perspective means it has yet to be proved when discussing it in relation to young student adult groups.

Since economic resources have been empirically found to be associated with an individual's saving motives (Xiao et al., 2011), therefore, it could be assumed that gold is relevant to the context of Malaysia. It was found that some individuals purposely hold gold as a cash converter instrument (Ahmad, Mansor & Nadiah, 2012). This had been found to function as a criterion in an intermediate fund. Therefore, this research suggests that there is one more financial instrument, after considering the Malaysian background, which can be considered as part of an intermediate emergency fund. As related to the characteristics of gold, this research argued that gold could be included in the intermediate fund. This is because gold was found to be more liquid than stocks or bonds; again less liquid than money in savings accounts.

3.3 Chapter Summary

In conclusion, there were inconclusive issues found in the literature, such as the categories of emergency fund and the instruments of each emergency fund category. In the meantime, there are several factors that would influence the preference of

emergency fund categories holdings, such as financial advice, income, job sectors and religion.

The Malaysian background was explained, which later will be related to the context of this thesis. Factors such as religion and culture, therefore, will be included as some of the items in developing the theoretical framework and models later. In relation, there was some evidence found that one of the financial instruments used as preparation for future emergencies in Malaysia is gold. Therefore, after considering the Malaysian context, it was found that gold could be suggested relevant to include in this research. This will be investigated later in further chapters.

CHAPTER 4

RESEARCH METHODOLOGY 1: RESEARCH DESIGN AND METHODOLOGY

4.0 Introduction

This chapter discusses the research design, research framework, research methods and data analysis procedures of this research.

4.1 Research Questions

There are four main research questions that had been developed. These are:

1. What is the effect of behavioural factors (i.e. attitude, subjective norms and perceived behavioural controls) towards the intention to form emergency fund formation behaviour among young student adults?
2. Does propensity to plan have an impact on the intention to form an emergency fund formation behaviour among young student adults?
3. How do young student adults prepare for emergency fund or for future emergencies?
4. What are the preferred sources of emergency fund among young student adults?

The questionnaire and survey interview were used as the research instruments. The details of research design are discussed in the next section.

4.2 Research Design and Research Method

Strategies of inquiry are types of quantitative, qualitative and mixed methods designs or models that provide specific direction for procedures in a research design (LeCompte & Schensul, 1999). The choosing of strategies for inquiries might shape the research design. According to Vaus (2001), research design will later relate to the method of data collection that is used in the research. For instance, Creswell (2009) illustrated research methods, as shown in table 4.1 below:

Table 4.1: Type of Research Methods

Quantitative Methods	Mixed Methods	Qualitative Methods
- Pre-determined	- Both pre-determined and emerging methods	- Emerging methods
- Instrument-based questions	- Both open- and closed-ended questions	- Open-ended questions
- Performance data, attitude data, observational data and census	- Multiple forms of data drawing on all possibilities	- Interview data, observation data, document data and audio-visual data
- Statistical analysis	- Statistical and text analysis	- Text and image analysis
- Statistical interpretation	- Across databases interpretation	- Themes, patterns interpretation

Sources: Creswell (2009, p.15)

In addition, Steckler, McLeroy & Goodman (1992) suggest three integrated models for quantitative and qualitative methods, which are 1) qualitative methods are used to help develop quantitative measures and instruments; 2) qualitative methods are used to help explain quantitative findings; 3) quantitative methods are used to establish a primary qualitative study; and, 4) qualitative and quantitative methods are used equally and in parallel. Since this thesis is purposely to understand the emergency fund provision behaviour among young student adults in Malaysia, the second integrated model by

Steckler et al. (1992) was suggested relevant to be used. The emergency fund provision behaviour that is defined by this research consists of two main behaviours, namely (i) emergency fund formation behaviour and (ii) the selection of emergency fund instruments behaviour. In dealing with those two types of behaviour, online questionnaire and extended survey interview approaches are used to answer the research questions.

The questionnaire in this research is useful for developing the model, answering the research questions and testing the hypothesis. In addition, survey interview is also used to gather more understanding on emergency fund formation behaviour and to support the questionnaire findings. In particular, these are helpful for a researcher in understanding financial behaviour in detail (Fünfgeld & Wang, 2009). Thus the selection of the research design runs parallel to the research objective.

4.3 Research Instruments

The following section discusses the research methods and instruments that were used in this research.

4.3.1 Online Survey Method

There are several methods of questionnaire distribution. For example, Oppenheim (1998, p. 102) identifies several distribution methods, such as face-to-face, postal or group-administered questionnaires. Although paper-based survey distribution methods have been dominant, online surveys have recently become a widely-used channel of data collection. Online survey methods can help researchers to reach their respondents with very low cost and within limited timeframes (Wright, 2005). In addition, it further

argues that online surveys also beneficial in accessing those people that may have stigmatized offline and are difficult to collaborate if the traditional method is used. There are several other advantages of the online survey method, such as convenience, low administration cost, flexibility (Evans & Mathur, 2005), time benefit, and they attracted (Van Selm & Jankowski, 2006) and obtained additional response-set information (Granello & Wheaton, 2004). Side by side, in an online survey method, low response rate and limited internet access ability are obviously be an other issues, i.e. respondents are not cognisant as to how to use the internet tools (Evans & Mathur, 2005).

According to Van Selm & Jankowski (2006), an online survey might be attractive to certain age groups, such as young people. Therefore, in this research it was decided that the online survey would be used to distribute questionnaires for data generation, partially because it is focuses on the young student adult group and partially because the data was collected in a limited timeframe. As such, the online survey provides a wide platform to access a specific segment of the population, as opposed to the traditional distribution method. Both the questionnaire and interview were generated via a web-based survey platform. Since this research focuses specifically on young student adults who have emergency fund, the way to access to this group was by using online survey: which has several advantages – one of which is to gain access to people that share specific interests, attitudes, beliefs and values regarding an issue, problem or activity (Wright, 2005).

Although issues such as sampling bias can arise using online surveys, this issue can be moderated by conducting multiple online surveys with the same or similar sample

targets (Wright, 2005). This means that researchers can gain a reliable picture of the characteristics of online survey participants and respondents (Wright, 2005). The sample for both questionnaires and extended open-ended survey interview were from the same sampling frame – something that will be discussed later in this chapter.

There are several ways of collecting data online such as e-mail surveys and website-based surveys (Granello & Wheaton, 2004). It is further explained that respondents for e-mail surveys receive an e-mail included with the survey questionnaire, which is then returned to the researcher. Website-based surveys need respondents and participants to travel to the website via a supplied link sent as an invitation by the researcher through traditional mail, e-mail, telephone or websites.

4.3.2 Sampling Procedures

Before the preliminary step and the actual field study will be done, the unit of analysis involved in the research was identified. The following sub-sections explain the sampling procedures, discussing the sample selection and the total sample that was targeted for this research.

4.3.2.1 Unit of Analysis

The sample unit is the represented unit of study. It usually refers to unit of individuals or group of people (Jupp, 2006). This research focuses on the emergency fund provision behaviour among young student adults. As such, students were selected by the researcher to become the unit of analysis for several reasons. Previous studies have indicated that students are one of the groups that potentially face future financial problems and life quality problems due to availability of credit in the market (Worthy et

al., 2010), and lack of personal investment knowledge (Volpe et al., 1996). According to Martin & Oliva (2001), lack of financial skills among young adults regularly results in a delay of financial responsibility during adulthood.

Students are proxy of young adults who are in the beginning of the young adulthood phase in their life-cycle. From a development perspective, some students face an important transition period as they move from their dependency on their parents towards personal and financial self-reliance (Soyeon Shim et al., 2012). Although there are also students who are still not yet financially independent, they do need to develop the skill of financial independence in order to manage their own money when they start at university and college. Therefore, developing good financial habits in this phase might potentially influence their future financial practice and behaviour.

The importance of financial wellbeing in this phase could not be neglected, as it will reflect their academic success and overall life satisfaction as well as their psychological and physical health. To prepare for future emergencies by having an emergency fund is one of the positive financial behaviours that are encouraged by the financial planner. A study by Xiao et al., (2009) has found that positive financial behaviours by students contribute to overall financial satisfaction and further life satisfaction.

The question is, then, are student able to save? There is evidence that students do have their own savings. Erskine, Kier, Leung & Sproule (2006) found that students do save for general reasons. Also, Wheeler-Brooks & Scanlon (2009) identified from their interviews in the United States that some young adults are able to save, especially when parents offer financial help, as opposed to than those who did not. In addition, Tuveesson & Yu (2011) argue that although students in Sweden had limited sources of income,

they were able to allocate savings from it. Consistent with that, it was highly probable for young and uneducated people not to have any emergency fund (Huston & Chang, 1997). Tuvevsson & Yu (2011) further claimed that study on savings among students has received a lack of attention among researchers. Therefore, studying young adults who are educated could be predicted to provide more space to find those who currently have an emergency fund, as it is the objective of this research.

This research, therefore, will focus on university students between the ages of 18 to 30 years old. The following section will discuss the sample size and sample design that is being used in this research.

4.3.2.2 Sampling Size

The quantitative approach in this research uses the questionnaire as a tool for data collection. The questionnaire was distributed randomly among students in Malaysia. The targeted sample size depends on the requirement of the statistical analysis tool used to analyse the data later on. The present research employs three main statistical analysis tools at different stages. The Exploratory Factor Analysis (EFA)³ is used for the data reduction procedure during the pilot study⁴. Then the Confirmatory Factor Analysis (CFA)⁵ and the Structural Equation Modelling (SEM)⁶ are used to analyse and model the data from the actual study.

³ EFA involves the Factor Analysis technique. "Factor analysis is an interdependence technique whose primary purpose is to define the underlying structure among the variables in the analysis" (Hair et al., 2013).

⁴ Data reduction following the EFA of the pilot study was less than ideal. It resulted in removal from the main questionnaire of the question about the use of borrowing in dealing with emergencies. In turn, this limited the opportunity for the research study to comment significantly about borrowing to set up an emergency fund.

⁵ CFA is about the test to confirm the measurement theory (Hair et al., 2013).

The minimum requirement sample for EFA, CFA and SEM remains to be debated. The general rule of thumb indicates that larger numbers of samples are better, preferably over the minimum of 100 samples. Nevertheless, Hair et al., (2013) argue that the rule of thumb does not necessarily need to be followed because the decision should be made based on other factors such as multivariate normality and estimation technique. There are several suggestions in the extant literature. For instance, the minimum required sample size has been put at $n=50$ (Stevens, 2009; Hair et al., 2013). However, Preacher & MacCallum, (2002) suggest that 20 to 40 cases are still enough to run EFA. Again, it is argued that as long as communalities among items are high, that will be more important and plays critical roles, rather than sample size issue *per se* (MacCallum, Widaman, Zhang & Hong, 1999; Preacher & MacCallum, 2002). Similarly with CFA and SEM, there is a minimum sample size defined as adequate, which is at least $n=30$ (Wolf, Harrington, Clark & Miller, 2013) and $n=50$ (Dawn Iacobucci, 2010; Sideridis, Simos, Papanicolaou & Fletcher, 2014).

4.3.2.3 Sampling Strategy

There are several types of sampling design, namely random sampling, non-probability sampling and mixed sampling design (Kumar, 2010). Sarantakos (2013) explained that probability sampling is when every unit of the target population has an equal, calculable and non-zero probability of being included in the sample. In contrast, non-probability sampling procedure does not employ rules of probability and does not ensure

⁶ “SEM is Multivariate technique combining aspects of factor analysis and multiple regression that enables the researcher to simultaneously examine a series of interrelated dependence relationship among the measured variables and latent constructs (variates) as well as between several latent constructs” (Hair, Black, Babin & Anderson, 2013, p.546)

representativeness. Examples of sampling design are summarised in Table 4.2, as follows:

Table 4.2: Example of Sampling Design

Sampling Type	Example	Characteristic
Random sampling	Simple random sampling	Unit samples have equal chance to be selected and independent from each other.
	Systematic random sampling	The selection of sample units depends on the selection of a previous sample.
	Stratified random sampling	The target population is divided into a number of strata, and the sample is drawn from each stratum.
	Cluster sampling	The samples are selected from identified clusters or groups.
Non-probability sampling	Accidental sampling	Samples accidentally come into contact with the researcher.
	Convenience sampling	Samples are collected and determined by the researcher and convenience to researcher.
	Purposive sampling	Samples are selected that are relevant to the research.

	Quota sampling	The researcher sets the quota of respondents to be chosen from the specific population group.
	Snowball sampling	The researcher chooses a few respondents and asks them to recommend other people who will meet the criteria of the research.

Sources: Sarantakos (2013, p.167)

Back to this research scope, the research questions were developed to investigate young student adults that currently had an emergency fund. In targeting this group, it was understood that they are an unknown or hidden population that need to be reached since the individual's savings motives vary (Canova et al., 2005; Fisher & Montalto, 2010), and it could be argued that not all individuals have mutually exclusive reasons for saving (Dyner et al., 2004).

The previous section (see 4.3.1) discussed the rationale of using online survey methods, especially when studying the young student adults group. In relation to that, this research also needs to access an unknown population, as the focus was only on those who already have emergency fund. Therefore, this research used the convenience sampling procedure in order to choose the samples. Convenience sampling can be used in both quantitative and qualitative approaches and is practical to be used to access the population when it is difficult for the researcher to reach (Atkinson & Flint, 2004).

In this research, the data collection process takes two stages: 1) pilot data collection and 2) the actual data collection process. For pilot and actual field data collection process, there is no difference between the sample unit and sampling procedure that is used for

both quantitative and qualitative approach. The basis of the sampling is all the public and private universities in Malaysia. The full list of 55 universities in Malaysia is shown in Appendix 5. The gatekeeper was contacted to ask their help and permission in sharing the questionnaire link in the student information system. Two different gatekeepers at the universities were contacted: Student representative or Union (for pilot study) and Student Affairs & Alumni Department (for actual study). Although all 55 universities were contacted through both gatekeepers, only 22 (for pilot study) and 23 (for actual study) universities responded to share the link. This represents a university response rate of 40% and 42% respectively. According to MOHE (2016), there are 1,156,293 students enrolled in Malaysian universities in 2013. In contrast, the total respondents in this research were only 86; representing less than 1% of total Malaysian universities' student population. Admittedly, the generalisability of the findings of this thesis is somewhat limited as it is mainly based on the convenience sampling method as well difficulties in ascertaining the true population of young student adults with emergency fund in place. Nevertheless, the thesis does provide a series of reliability tests in the later part of this chapter to see whether the measurement scale meets the recommended reliability test parameters.

The information systems included formal university information systems and webpages, such as official websites, Facebook pages and blogs. It can be argued that mediums such as Facebook are one of the appropriate tools to reach the hidden population and provide geographical distributions (Baltar & Brunet, 2012).

All students between the ages of 18 to 30 years old were invited to the survey questionnaire and open-ended survey link. At the end of the questionnaire page, the

respondents were also invited to leave their email if they were interested in answering the online interview or to just click to the online interview link, which directly brought them to the online survey interview. In order to identify that they did have an allocated emergency fund, the questionnaire and interview introduction statement was developed (see Appendix 1: similar introduction statement was use in the online survey interview). In addition, the respondent, for instance, was asked to answer a question to confirm if they actually had emergency fund or not (See Question 2: Section 1). In total, 56 out of 59 and 86 out of 91 useable questionnaires were collected for pilot and actual formal study respectively. The data collection procedure has followed the research ethics consideration process and has been carried out after getting the research approval from the CASS Research Ethics Panel University of Salford. The research approval letter is endorsed in Appendix 6. The research ethics will be discussed later on.

4.3.3 Questionnaire Design

A questionnaire is one of the instruments widely used in the social studies research. The advantage of a questionnaire is mainly the fact that they are inexpensive research instruments capable of reaching a wide geographical sample (Kumar, 2010, p.148). However, it has further been argued that researchers should also be aware of the limitations of using questionnaires. For example, limited additional information might be gained from respondents when compared with interviews.

In this research, the questionnaire was designed to achieve the objective and to answer the research questions. It was intended to investigate the factors contributing to emergency fund provision behaviour among young student adults. Therefore, each item

in the questionnaire was developed based on the research questions and hypotheses of this research.

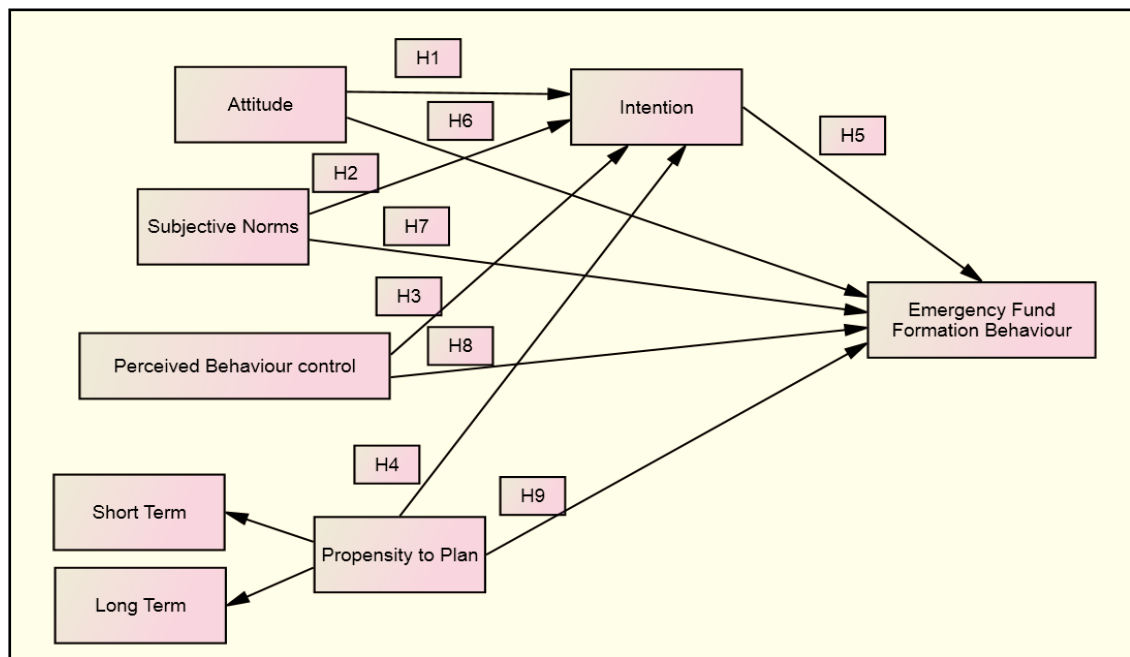
It is suggested that the new scale could be developed when a lack of studies had taken place that related to the particular current research topic (Hair et al., 2013). Previous studies on the theme of emergency fund have mainly adopted life-cycle hypotheses and the precautionary saving motive theories. Some factors, such as income and age, are becoming more important in determining the adequacy of emergency fund holding. As such, the behavioural perspective requires more focus in order to understand the actual financial behaviours (Xiao, Ford & Kim, 2011). Thus, this research adopted factors from the Theory of Planned Behaviour (TPB) as part of the conceptual framework. Anong & Fisher (2013) argued that their study used secondary data, which limits the measurement of variables when using the Theory of Planned Behaviour. They also suggested that the future research could also involve experimental or primary behavioural research to study its effects in consumer decision-making and implementation. The attitudes, subjective norms and perceived behavioural control were tested as the predictors in this research model. The intention⁷ to perform emergency fund behaviour was treated as mediating⁸ variable in this research. In addition, this research also included an additional factor: propensity to plan as predictor variable in the model. The discussion on the theory of planned behaviour is as mentioned in Section 2.6.2.1 previously.

⁷ Such a research focus is admittedly restrictive and limits the inferences that can be drawn in relation to the 'intention' variable that is covered in larger parts of the remainder of the thesis. Therefore, it is very important to stress that this research only focuses on those who have an emergency fund and ignores the intention of those who do not have an emergency fund.

⁸ Mediating variable is intended to address the effect in the relationship between exogenous (independent) and endogenous (dependent) variables (Awang, 2012b)

The conceptual framework for this research is illustrated in the schematic diagram in Figure 4.3 below. The variables in the conceptual framework were derived from the previous literature and some were added into this research to be consistent with the research objectives.

Figure 4.1: Conceptual Framework of this Research



The above conceptual framework was developed by modifying the model by Ajzen (1991). The causal and mediation effect of all the predictors are represented in the schematic diagram. Furthermore, ten hypotheses had been established to test the relationships later on.

Table 4.3 and Table 4.4 present the hypothesis for this research:

Table 4.3: The Causal Effects

No	Hypothesis	Hypothesis test the effect of main variables
1	H ₁	Attitude provides a significant and direct effect on intention towards emergency fund formation behaviour
2	H ₂	Subjective norms provide a significant and direct effect on intention towards emergency fund formation behaviour
3	H ₃	Perceived behavioural control provides a significant and direct effect on intention towards emergency fund formation behaviour
4	H ₄	Propensity to plan provides a significant and direct effect on intention towards emergency fund formation behaviour
5	H ₅	Intention provides a significant and direct effect on emergency fund formation behaviour
6	H ₆	Attitude provides a significant and direct effect on emergency fund formation behaviour

No	Hypothesis	Hypothesis test the effect of main variables
7	H ₇	Subjective norms provides a significant and direct on effect emergency fund formation behaviour
8	H ₈	Perceived behavioural control provides a significant and direct effect on emergency fund formation behaviour
9	H ₉	Propensity to plan provides a significant and direct effect on emergency fund formation behaviour

Table 4.4: The Mediator Effects

No	Hypotheses	Hypotheses test the effect of main variables
10	H ₁₀	Intention mediates the relationship between attitude, subjective norms, perceived behaviour control and propensity to plan towards emergency fund formation behaviour

4.3.3.1 Definitions and Measurement of Variables

This section discusses the definitions and measurement of variables that are used in this research. The variables and items in the questionnaire are summarised in Appendix 3

and Table 4.3. All of the respondents were asked to choose to rate their agreement between 1 and 10. The developments of items in the questionnaire will be explained further in the next section.

In this research, the variables are grouped under three categories. Since Structural Equation Modelling (SEM) is used as the statistical analysis to analyse the questionnaire⁹, the variable categories in this research can be categorised as follows: 1) Exogenous variables¹⁰, 2) Endogenous variables¹¹ and 3) Mediating variables¹². The principle of SEM will be explained further later in this chapter.

4.3.3.1.1 Exogenous Construct

There are four exogenous constructs: attitude, subjective norms, perceived behavioural control and propensity to plan. These are used to test the relationship towards intention and emergency fund formation behaviour among young student adults.

4.3.3.1.1.1 Attitude

In the extant literatures, it has been shown that attitudes towards debt might contribute to the emergency fund formation behaviour. In addition, previous studies have shown that there are possible relationships between attitude and savings behaviour. However, the direct relationship between attitude on intention and emergency fund formation behaviour remains questionable. Seven items were constructed to measure attitudes towards emergency fund formation behaviour.

⁹ This will be further discussed in detail. See Section 4.4.5 for the discussion on the analysis procedure.

¹⁰ Exogenous variables are the latent independent variables.

¹¹ Endogenous variable are the latent dependent variables.

¹² The Mediating variable has a dual role; it acts as a dependent variable in the first equation and as a dependent variable in the second equation (Awang, 2012b, p.20). The purpose is to mediate the relationship between the independent variable and the dependent variable.

4.3.3.1.1.2 Subjective Norms

Subjective norms are the social pressures on individuals to perform particular behaviour (Ajzen, 1991). The research on financial behaviour among young adults found that family and friends are the social agents that influence their financial behaviour (see Section 2.3.1). This research predicts that besides family and friends, there are two other factors under this construct that could be included, especially considering the Malaysian contexts. The factors of culture and religion, then, will be included in this research. As found in Chapter 3, the culture factor could be predicted as another factor that contributes to emergency fund formation behaviour and drives the type of instrument chosen for preparation of emergencies. However, the strong relationship is still questionable, since it is not empirically tested enough.

Religious factors will be added in this research, as Huston (2012) argues that religion is one of the social influences that might impact on an individual's financial behaviour. This could be suggested to relate to the previous chapter's discussion, when there are several religions practicing in Malaysia (i.e. Muslims are choosing to practice *Shariah*¹³ compliance). Therefore the emergency fund behaviour among young adults is predicted to contribute to a different finding if a relationship occurs.

Subjective norms will be measured based on the perceived social pressure to perform or not to perform the emergency fund behaviour. As previously noted, the subjective norms will be measured by asking respondents about the possible pressures exerted on them by family, friends, religion and culture to perform the emergency fund behaviour. Four items will be used to measure the subjective norms.

¹³ Islamic law

4.3.3.1.1.3 Perceived Behavioural Control

According to Ajzen (2002), perceived behavioural control should be measured by “asking direct questions about capability to perform a behaviour or indirectly on the basis of beliefs about the ability to deal with specific inhibiting or facilitating factors.” Therefore, respondents were asked about their self-belief to form an emergency fund and if their current sources of income make them able to perform an emergency fund. Moreover, back to the context of this research, respondents were asked to consider the potential consequences of two government policies on their emergency fund formation behaviour: a minimum wage and a maximum retirement age¹⁴. Four items will be used to measure the subjective norms.

4.3.3.1.1.4 Propensity to Plan

The propensity to plan has not yet been studied in the emergency fund behaviour in previous research. According to Lynch, Netemeyer, Spiller & Zammit (2010) “the propensity to plan and its effects may vary by situation as well as well as by person.” It has further been argued that the propensity to plan is mediated by intention. Although the relationship towards emergency fund behaviour is still unknown, previous studies on emergency fund have mentioned the relationship between time horizon and savings behaviour. It has also been argued that planning behaviour for future saving was clearly becoming the internal factor among young adults, prompting them to perform the financial behaviour (Shim et al., 2012). They suggested that the financial planning horizon element could be considered by future studies on savings that will utilise the theory of planned behaviour as theoretical background.

¹⁴ See section 1.3

There are studies that have reported different findings on the relationship between saving horizon and saving behaviours. For instance, Fisher and Montalto (2010) found that the saving horizon is strongly related to savings behaviour, while Fisher and Hsu (2012) proposed that there was no strong relationship. However, they further argued that the time periods would be decided differently among individuals toward their own savings and consumption behaviour. It has been suggested that further studies are necessary to explore the short and long term determinants of savings horizon (Fisher, 2010).

Lynch Jr. et al. (2010) also defined “propensity to plan for situations involving short-run and long-run uses of time and money.” The original scale developed by them measured the propensity to plan with the mediation of intention. This scale, therefore, might be suitable to be adopted by this research. However, it must be modified to fit the aims of this research. The modified propensity to plan for money scale by Lynch Jr. et al. (2010) is used to measure the relationship towards intention and emergency fund formation behaviour. Eight items in total represent the propensity to plan, which consist of four for each short term and long term constructs.

4.3.3.1.2 Mediator Construct: Intention

As previously mentioned, intention is the mediator construct in this research conceptual framework. The measurement of this variable is discussed further in this section.

According to Ajzen (1991), “intentions are assumed to capture the motivational factors that influence a behaviour.” Previous studies (Xiao and Noring, 1994; Fisher & Montalto, 2010) have indicated the need for future research in order to find the relationship between motivation to save and the saving behaviour itself. As Ajzen

(2011) stated, “to test the ideas that adding anticipated affect or the motive to avoid uncertainty may improve prediction of intentions.” Ajzen (1991) further stated that “motivational factors that influence a behaviour; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behaviour.” Thus, in this research, four items that ask about the willingness to plan for the emergency fund formation measure intention.

4.3.3.1.3 Endogenous Construct: Emergency Fund Formation Behaviour

The conceptual framework for this research indicates that there is one endogenous construct. Previous studies, such as Chang & Huston (1995), Huston & Chang (1997), Chang et al., (1997) and Bi & Montalto (2004) measured the adequacy level of emergency fund by category (see Table 3.1 for the details). It was found that individuals might perform three main financial behaviours: saving, investment and borrowing. These were previously discussed in Sections 2.5 and 3.1. Thus, the items are developed by asking respondents if they would perform any one or more of those financial behaviours for emergency fund formation.

This variable is measured using three items. Ajzen (2011) argued that it is important to measure the behaviour with the question that the behaviour is performed or not performed because it will affect the results on the mediating variable, which is intention. This approach has been shown to be important to studies that use the theory of planned behaviour. Consistent with this, this research will measure the formation of the emergency fund formation behaviour by questioning whether the respondents have savings, make investments, or source credit in allocating their emergency fund. These questions are measured in intervals that require a rating from 1 to 10.

4.3.3.1.4 Other Questions

Respondents were asked several questions about their details including demographic background questions such as age, gender, level of education, education background and marital status in order to explore respondent's characteristics. Besides, the respondents were also asked whether their monthly expenses were sponsored by either their family or friends or both. They may indicate that they were dependent on financial aid if their monthly expenses were sponsored and vice versa. Financial aid from parents, for instance may contribute to emergency fund provision behaviour. Previous study by Friedline, Elliott & Chowa, (2013) found that young adults that received financial aid were less likely to have savings. However, there was no evidence found about the differences of savings between those that received financial aid to save than those who do not (Friedline, Elliott & Nam, 2011).

Table 4.5: Justification of Variables in Questionnaire

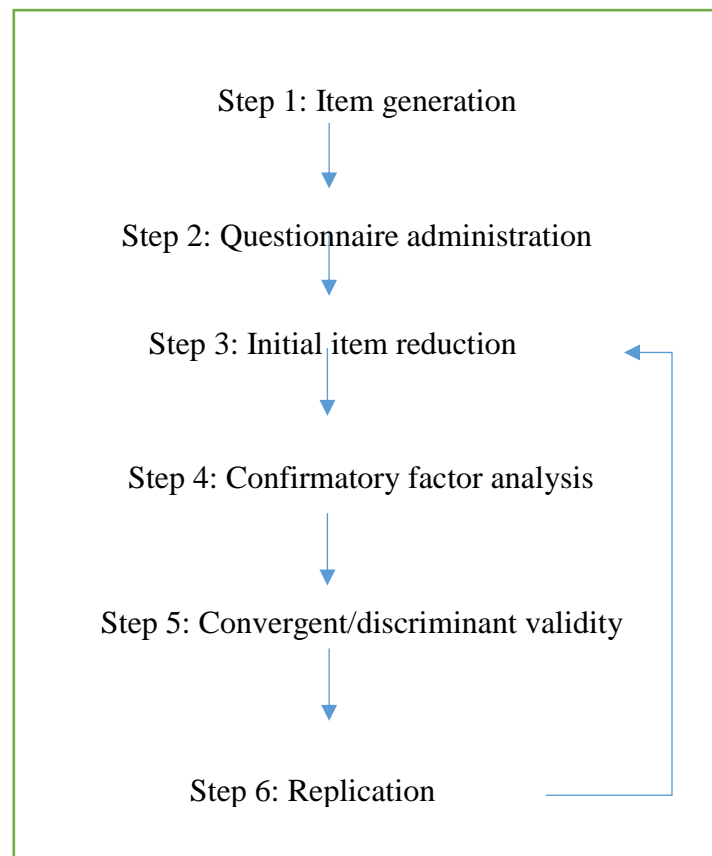
Variable types	Variable name	Definitions	Number of items measured	Relevant questionnaire numbers
Exogenous	Attitude	The degree to which a person has a favourable or unfavourable on emergency fund formation behaviour.	7 items	Section 3: Question 1
Exogenous	Subjective norms	Perceived social pressure to perform emergency fund formation behaviour. This includes four social factors: family, friends, culture and religion.	4 items	Section 3: Question 2
Exogenous	Perceived behavioural control	The capability to perform emergency fund formation behaviour on the basis of beliefs about ability to deal with specific inhibiting or facilitating factors.	4 items	Section 3: Question 3
Exogenous	Propensity to plan	Propensity to plan for situations involving short-run and long-run plans for emergency fund formation behaviour.	8 items	Section 3: Question 4
Mediator	Intention	The intention to perform the emergency fund formation behaviour.	4 items	Section 3: Question 5
Endogenous	Emergency fund formation behaviour	This to identify that individuals perform the formation of emergency fund behaviour.	3 items	Section 1: Question 2

Note: Refer to Appendix 3 for details about the items. This table refers to all items used for the pilot study. These items were later screened before data was collected for the actual study. The screening process, namely Exploratory Factor Analysis (EFA), is further explained in this chapter.

4.3.3.2 The Development of the Emergency Fund Formation Behaviour Measurement Scale

The measurements for the items in the questionnaire for this research were developed and adopted in the manner discussed previously. The researcher developed all items in the constructs according to carefully followed procedures. The process of developing all of the items on the questionnaire was followed via a framework suggested by Hinkin (1998), illustrated below:

Figure 4.2: Scale Development Process



Source: Hinkin (1998, p.106).

This framework suggested that the researcher should follow six steps during the development of their questionnaire. In this research, step 1 to step 3 were covered

during the preliminary process that included the pilot test. By contrast, step 4 to step 5 were followed during the data analysing of the actual fieldwork. These steps are important, as they test the reliability and validity of a questionnaire. According to Hinkin (1998), researchers may use two approaches in step 1: a deductive or an inductive approach. Deductive approaches mainly follow the extant literature by developing theoretical definitions that then guide the item development. It can be deduced, therefore, that research followed the deductive approach in developing the measurement items. This research was design to test the hypothesis established by an analysis of the current theoretical background. The measurement items in the questionnaire for this research were developed based on theoretical definition (See Section 4.4.3.1).

The Exploratory Factor Analysis (EFA) was employed during stage 3. One of the uses of the EFA is to develop questionnaires and item reduction process (Field, 2013). The EFA procedure will be explained further in this chapter.

4.3.3.2.1 Validity and Reliability in the Questionnaire

This section will discuss the questionnaire development process. It covers the pre-test questionnaire and the piloting of the questionnaire. The EFA procedure is also covered, alongside a discussion on the reliability of results and their validity in shaping the modification of the final questionnaire.

4.3.3.2.1.1 Pre-test questionnaire

Hinkin (1998) argued that the pre-test of a questionnaire is one of the practices of the content validation process. This research ran two stages of pre-test questionnaire. The

convenience sampling method was used because the main objective of pre-test was to find any potential issues regarding content understandings and the overall design of the questionnaire. Colleagues and supervisors were asked to help answer the questionnaire, and some were distributed via the link to the other potential respondents via e-mail. Twenty respondents undertook the study. Among the feedback were comments on wording issues – some found some questions confusing and unclear. The first pre-test was issued via a Google form using the following link:

https://docs.google.com/forms/d/1ob71VVIlzXJNnk3MT4lSmsGbkbGGs5yf4P_nS1kJxAU/viewform

A second pre-test questionnaire was issued to validate the content and wording further. A formal online survey link was used for the second questionnaire pre-test. The Bristol Online Survey (BOS) platform, which is subscribed by the University of Salford, was used. The link for the questionnaire was designed as follows:

http://www.survey.bris.ac.uk/salford/emergency_1

There were thirteen respondents to the second pre-test. Nine of the thirteen respondents had previously responded to the first questionnaire pre-test. At this stage, there were several useful comments. Respondents suggested that the formal platform increases the assurance of confidentiality because of the institutional backing and the secured link. In addition to this, the respondents also noted that the wording and content of the questions were more structured and clearly defined.

4.3.3.2.1.2 Piloting the Questionnaire and Exploratory Factor Analysis: Item Reduction Procedure

According to Oppenheim (1998), pilot work is one of the steps that should not be underestimated by researchers. It also further argued that researchers should test their questionnaire through the actual sample frame that represented the actual fieldwork later on.

Therefore, the pilot work for this research has been carried out using a sample drawn from the actual student population of private and public universities students in Malaysia. Student representatives were contacted to share the questionnaire link among the student body. Only 40% of the sample frame replied and agreed to share the link through their official information portals, blogs and Facebook pages. The others either did not respond or declined to share the questionnaire link. The link was available from 3rd March 2014 to 3rd April 2014 and is represented as follows:

<http://www.survey.bris.ac.uk/salford/survey2014pilot>

59 respondents answered the questionnaire, of which 56 questionnaires were found to be acceptable for analysis based on the research requirements established by the data screening: respondents were asked whether they performed either one or more of the following financial activities: savings, investments or borrowing for emergency fund. Those who marked 1 = not at all for all activities were discounted from the research. The respondents were provided with open-ended questions to prompt them to leave any comments about the questionnaire. Only two issues were found addressed by respondents, of which the first was the difficulty to define the term “*monthly income*” for those that are full time students and do not work. The second issue was the lack of

understanding about financial terms such as “*financial instruments*” to those who are students of sciences. Thus, the questionnaire was further modified to counter with those issues, such as providing explanation options in the final questionnaire for actual study.

The results from the pilot study were then used to run the Exploratory Factor Analysis (EFA) and reliability test. These were used to refine scales, to assess multicollinearity problems and allow the item reductions (Hinkin, 1998; Awang, 2012; Field, 2013). In addition, factor analysis is used to help researchers deal with the latent variable¹⁵. In this research, the attitude, perceived behavioural control, propensity to plan, subjective norms, intention and emergency fund formation behaviour are the latent variables, and all the variables were measured by several items in the questionnaire.

The Principle Component Factor Analysis (PCA)¹⁶ with Oblique Rotation was performed for 30 items with oblique rotation (direct oblimin)¹⁷. The measure of sampling adequacy by Kaiser-Meyer-Olkin (KMO)¹⁸ was 0.753 as shown in Table 4.4. This has proved above 0.6, which indicates the data at hand is adequate to proceed to perform Exploratory Factor Analysis (Awang, 2012b) and all KMO values for individual constructs were greater than 0.5, which was above the acceptable limit value (Field, 2013). This is illustrated in Table 4.5.

¹⁵ Latent variable is the variable that cannot be directly measured (Field, 2013), which also known as Latent Construct (Hair et al., 2013).

¹⁶ PCA procedure is to see the items establishing and contributing to the particular component (Field, 2013) which also aim to produce unidimensionality scale (Williams, Brown & Onsman, 2012).

¹⁷ Factor rotation method: Field, (2013) suggests to use direct oblimin if the theoretical grounds suggests that the variables might correlate. Then this fits into this research.

¹⁸ KMO is measure the sampling adequacy and it varies between 0 and 1. The minimum recommendation accepting values is greater than .5 (Field, 2013). Hair et al., (2013) categorise the measurement as meritorious ($\geq .80$); middling ($\geq .70$); mediocre ($\geq .60$); miserable ($\geq .50$); and unacceptable ($< .50$).

An initial analysis of seven factors was run to obtain eigenvalues¹⁹ for each factor. Components with eigenvalues exceeding 1 were selected (Pallant, 2013). It was decided to retain only all the items that presented 0.6²⁰ and above factor loadings. Finally, from the analysis, five factors found extraction into one component, namely attitude, subjective norms, perceived behaviour control, intention and emergency fund formation behaviour. However, propensity to plan produced two sub-components with later on namely as propensity to plan short-term and propensity to plan long-term. The summaries of EFA procedures after items were deleted are represented in Table 4.6, and only items loading above 0.6 are displayed. Several items were deleted due the less 0.6 factor loading²¹. The items that were deleted are ATT6, ATT7, PTPShort1 and EFFB3.

Table 4.6: KMO and Bartlett's Test for All Items

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.753
Bartlett's Test of Sphericity	Approx. Chi-Square	1362.463
	Df	435
	Sig.	.000

Note: The KMO for all items. Value exceeded recommended value, which closes to 1.0. The Bartlett's test significant value is significant (close to 0.0) suggesting that the data appropriate to run EFA.

¹⁹ "Column sum of squared loadings for a factor; also referred to as the latent root. It represents the amount of variance accounted for by a factor" (Hair et al., 2013, p.90).

²⁰ The acceptance item loading suggested for sample over 85 is .60 and above. See Hair et al., 2013, p.115 for more explanation suggesting loading for the remaining items which are based on the sample size.

²¹ See Appendix 3 for the summaries of all items before EFA procedure.

Table 4.7: KMO and Bartlett's Test for All Individual's Components

No	Construct	Number of items	Cronbach's Alpha Specification		KMO
			Approx. Chi Square	Sig.	
1	Attitude (ATT)	7	129.751	0.000	0.816
2	Subjective Norms (SN)	4	78.271	0.000	0.767
3	Perceived Behaviour Control (PBC)	4	107.922	0.000	0.773
4	Propensity to Plan (PTP)	8	459.400	0.000	0.880
5	Intention (INT)	4	119.459	0.000	0.772
6	Emergency Fund Formation Behaviour (EFFB)	3	9.395	0.024	0.521

Note: The KMO for individual components. Values exceeded recommended value, which closes to 1.0. The Bartlett's test significant value is significant (close to 0.0) suggesting that the data appropriate to run EFA (Awang, 2012b; Field, 2013) .

As a result, the components were labelled according to the predictor in the model, namely attitude (five items), subjective norms (four items), perceived behaviour control (four items), propensity to plan (two sub-components, seven items), intention (four items) and emergency fund formation behaviour (two items).

Table 4.8: Summary of EFA Results after Deleted Items

Item	Component 1	Component 2	Component 3	Component 4 (1)	Component 4 (2)	Component 5	Component 6
ATT5	0.847						
ATT2	0.817						
ATT4	0.764						
ATT3	0.733						
ATT1	0.724						
SN3		0.876					
SN1		0.820					
SN4		0.807					
SN2		0.716					
PBC2			0.900				
PBC3			0.900				
PBC4			0.782				
PBC1			0.763				
PTPSHORT3				0.977			
PTPSHORT4				0.949			
PTPSHORT2				0.700			
PTPLONG1					0.954		
PTPLONG2					0.935		
PTPLONG4					0.928		
PTPLONG3					0.919		
INT4						0.929	
INT1						0.864	
INT3						0.814	
INT2						0.795	
EFFB1							0.816
EFFB2							0.784

Note: Details of the items are presented in Appendix 3.

4.3.3.2.1.3 Reliability Analysis for Measuring Items

In the previous section, the item reduction procedure by performing EFA was run. The left items in each construct will then indicate the reliability. Table 4.7 summarises the detail of Cronbach's coefficient alpha score for each construct after items were deleted.

Table 4.9: Reliability Statistics for All Constructs

No	Construct	Number of Items	Cronbach's Alpha	Specification
1	Attitude (ATT)	5	0.842	Reflective
2	Subjective Norms (SN)	4	0.818	Reflective
3	Perceived Behaviour Control (PBC)	4	0.859	Reflective
4	Propensity to Plan (PTP)	7	0.937	Reflective
5	Intention (INT)	4	0.869	Reflective
6	Emergency Fund Formation Behaviour (EFFB)	2 ^a	0.528	Reflective

Table 4.7 summarises the Cronbach's alpha for all constructs. Hinkin (1998) suggests that 0.70 is the minimum value for newly developed measures. As shown, the values of Cronbach's alpha are: 0.842, 0.818, 0.859, 0.937 and 0.869 respectively for the constructs of attitude, subjective norms, perceived behaviour control, propensity to plan and intention. All the values shown are above the minimum recommended value. However, the alpha for emergency fund formation behaviour is less than 0.7. According to Pallant (2001), if the Alpha value is less than 0.7, the researcher needs to make a decision regarding the items based on the results from the "Corrected Item-Total Correlation" column. If the values are less than 0.3, then it is recommended that the

researcher deletes the item. As the items in the EFFB constructs show the value as being over 0.3, as presented in Table 4.10, it has been decided to retain all the items.

Table 4.10: Results for Emergency Fund Formation Behaviour Construct

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation
Saving	4.38	10.057	.381	.145
Investment	7.11	5.006	.381	.145

After the EFA process, the modification of the questionnaire was carried out based on the findings. This involved the items reduction process and wording modification to the questionnaire. The final questionnaire that was used is detailed in Appendix 1. It was supplied in the following online link, and was available from 17th April 2014 to 17th June 2014:

<https://salford.onlinesurveys.ac.uk/emergencyfund2014>

4.3.4 Survey Interview Design

The second part of the primary data used in this research was obtained via survey interviews. This section discusses the detail of the interview process. There are several ways to conduct interviews. For example, face to face interviews, telephone interviews and/or an e-mail interviews or online interviews. For this thesis, the researcher chose to undertake online interviews because it is predicted that participants would be more willing to reveal their perspectives on emergency fund formation behaviour in this way. Alongside this, it was a more attractive tool for the younger age group (Van Selm &

Jankowski, 2006). It has also been argued that an e-mail interview provides a convenient environment and time to participate (Burns, 2010) and is more flexible, so might be more suitable to study the behaviour of students (Silverman, 2006) . Since the sample for this research is students, who might be full-time or part time, online interview allows them higher flexibility to participate.

The researcher's e-mail was provided to allow participant interaction if this was required. It provided a tool for feedback, as well as ensuring that the interview could be conducted effectively (Meho, 2006). Participants were asked to answer eleven open-ended questions and all answers were taken as confidential. The interview link is as follows:

<https://salford.onlinesurveys.ac.uk/onlineinterviewemergencyfund>

4.3.5 Research Ethics

The researcher was aware of research ethics and followed the ethical parameters that informed this research. The followings are the ethical aspects that involved in this research.

The first ethical consideration involved the gatekeeper, as this research contacted the universities previously noted to obtain permission to distribute the questionnaire and survey interview links to students. The gatekeeper was important in this context, as they represent the first point of contact in this process. As explained in the previous section, there were two gatekeepers at the universities contacted: student representatives or unions (for the pilot study) and the Student Affairs & Alumni Department (for the actual study). Both gatekeepers were contacted via e-mail and the formal contact letter

is supplied in Appendix 8. The gatekeepers were selected through the information that is provided online by the universities. The person in charge of the department and student union were contacted.

There were only 22 (for pilot study) and 23 (for actual study) out of 55 universities that agreed to share the survey link. There are difficulties in getting cooperation from some universities. They either refused to share the link or did not give any response after several attempts of contact to indicate whether they agreed to share the link.

The second ethical consideration was in terms of dealing with respondents of questionnaire and participant of survey interviews. A cover letter was provided to outline the purposes and needs of the study. The cover letter indicated the formal nature of the study and also included information about the researcher. This offering helped participants feel confident about the confidential nature of the study. The respondents and participants were assured of confidentiality by the researcher. In addition, no sensitive questions were asked, and they were allowed to withdraw from the survey at any stage.

There were challenges in terms of having more respondents and participants than the sample in this research. This is because the main objective and aims of this research were related to the emergency fund provision among young student adults and only those that already had emergency fund were the focus. Therefore, the population was unknown. The online survey method used was found relevant to access the population needed but it did not contribute to gathering a higher response rate in this research context. The samples gathered for this research were widely spread across Malaysia hence not biased towards a particular region or state.

In addition, respondents were offered to enter the prize draw, if they were interested, as one of incentives to participate in this research survey. This was suggested to attract respondents to participate in the research and to help to increase the response rate (Munn & Drever, 1990). Some studies, such as Wiley, Han, Albaum & Thirkell (2009) used this technique as one of its manipulation tools, alongside other tools, such as follow up, pre-notification and a credible e-mail address. They further found the incentive of a lucky draw showed a difference in the completion rate in their study. However, this thesis used the lucky draw at the end of the questionnaire, with respondents only informed and offered to enter the prize draw if they finished or completed the questionnaire. The notification page was only present at the end. This was purposely to reduce issues, such as respondents participating in the study because they were attracted to the prize draw only and it could also be assumed to reduce the issue of those answering the questionnaire that did not have an emergency fund.

4.4 Data Analysis Procedure

The following section will discuss the data analysis procedure for the data provided by the questionnaire and survey interview in this research.

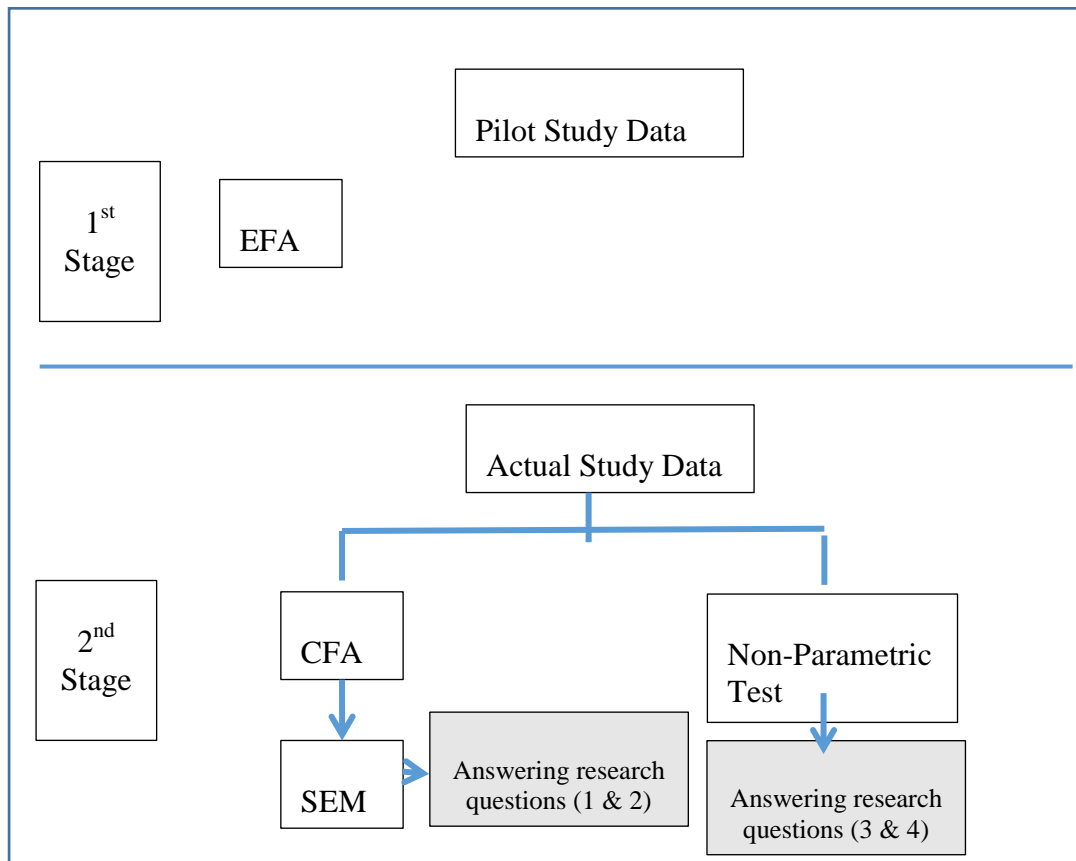
4.4.1 Analysing Questionnaire Data

This research adopted several data analysis procedures. The procedures consisted of Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), Structural Equation Modelling (SEM) and Non-Parametric tests (i.e. Chi-square test).

The first stage of data analysis mainly implemented EFA procedure. This was discussed in Section 4.4.3.2 as being primarily used to analyse the data from the pilot study only.

The actual data gathered from the field was analysed using the remaining procedure, according to their respective purposes. To explain this process, Figure 4.5 summaries the data analysis procedure for the questionnaire data. This illustration explains that the data processing procedure involved two separated main analyses. The first focused mainly on the modelling of emergency fund allocation behaviour (i.e. CFA and SEM) and the remaining data was analysed using a Non-Parametric test. These procedures were chosen to facilitate answering the overall questions raised by this research.

Figure 4.3: Summary of Questionnaire Data Analysis Procedure for This Research



Note: The stages mean the data collection timescales are different. The 1st stage is about the data gathered in the pilot study and the 2nd stage is the actual study data. See 4.4.2.3 for an explanation on the data gathering process.

4.4.1.1 Modelling Procedure

One of the focuses of this research was to develop the emergency fund allocation behaviour model in such way that it was then possible to answer the research questions and test the research hypotheses. This process mainly involved two main important procedures of data analysis, namely CFA and SEM. This followed the six-stage process suggested by Hair et al., (2013) presented as in Figure 4.6.

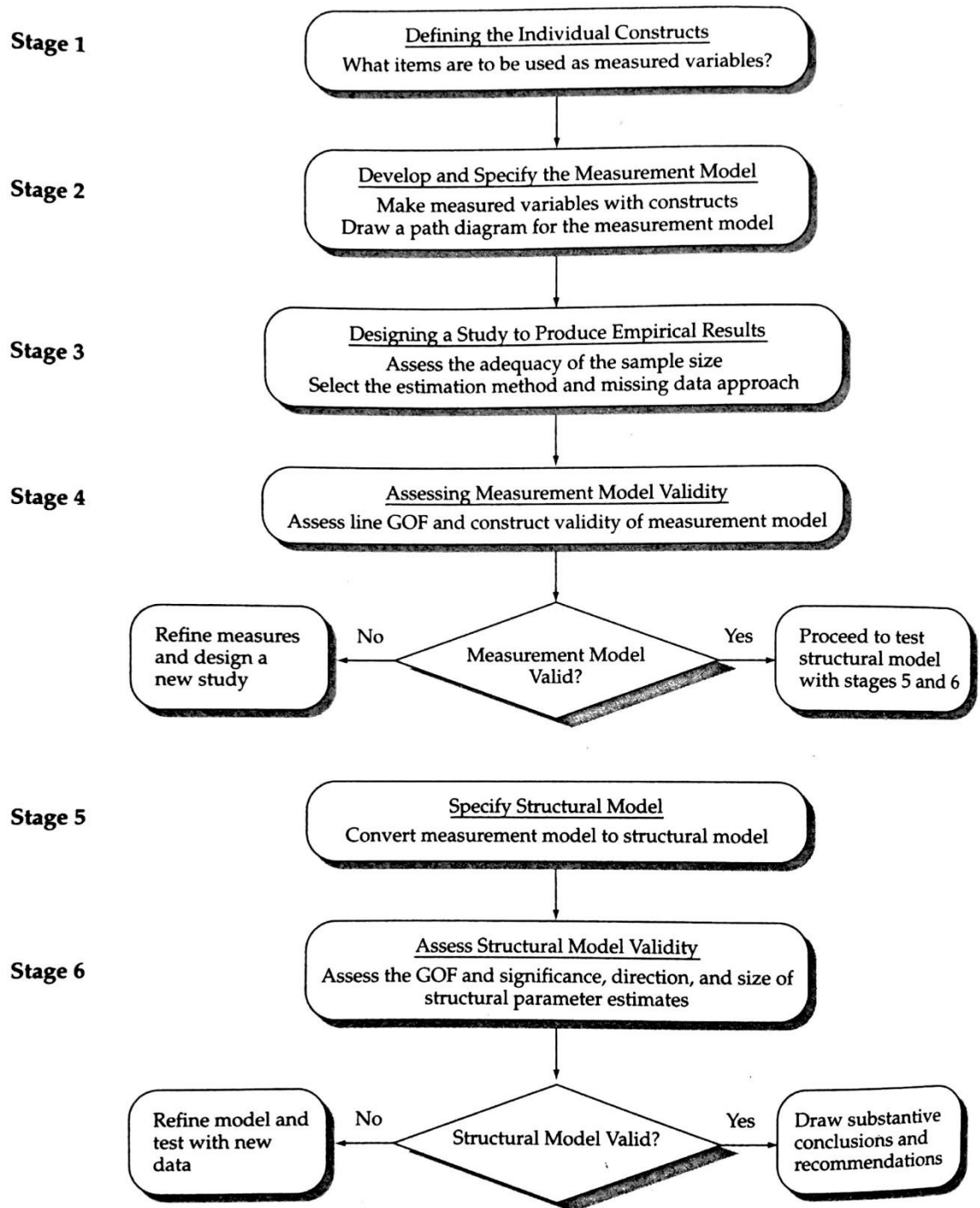
There are similarities between Hair et al.'s (2013) modelling process and the Scale Development Process by Hinkin (1998)²². Both Hinkin (1998) and Hair et al. (2013) suggested developing the measurement model in CFA before performing the SEM analysis. This is presented as being the beginning of step 4 in Hinkin (1998) and stage 2 by Hair et al. (2013). It could be argued, then, that these procedures are linked with each other and they confirm the validation and reliability of measurement scales, measurement models²³ and structural models²⁴. In addition, CFA is also considered as part of modelling process if the researcher is using SEM in the data analysis (Awang, 2012b).

²² See Section 4.4.3.2 for the discussion.

²³ “Specification of measurement theory that shows how constructs are operationalized by set of measured variables” (Hair et al., 2013, p.601).

²⁴ “Showing how construct are associate with each other” (Hair et al., 2013, p.550).

Figure 4.4: The Six-Stage Process for Structural Equation Modelling



Sources: Adopted from Hair et al., (2013, p.566).

4.4.1.1.1 Confirmatory Factor Analysis (CFA)

CFA tests how well the items belong to constructed or measured variables (Hair et al., 2013). After developing the measurement scales, the data collected from the actual study was used to assess the measurement model. The key main purpose of CFA is as a confirmatory test of the measurement theory.²⁵

The predictors in the conceptual framework for this research (See Figure 4.3) were measured via multiple items in the questionnaire. This represented that the constructs in the model are conceptualised as a latent constructs. The new measurement scale developed by the researcher needs to be quantitatively assessed in terms of the quality which then provides evidence of construct validity with performing CFA (Hinkin, 1998). Besides, CFA provides the researcher with three main assessments that need to be followed, namely unidimensionality, validity and reliability of the constructs (Awang, 2012b).

Unidimensionality²⁶ is achieved by examining the fitness indexes²⁷ and low factor loading of each construct, and deleting the low factor loading that contributes to the poor fitness index of measurement model (Awang, 2012b). The test of unidimensionality becomes critically important when there are more than two constructs involved in research (Hair et al., 2013). They further argue that although the researcher uses the established scales, the validity and unidimensionality of these scales still must

²⁵ “Series of relationship that suggest how measured variables represent a construct not measured directly (latent). A measurement theory can be represented by a series of regression-like equations mathematically relating a factor (construct) to the measured variables” (Hair et al., 2013, p.601).

²⁶ “Unidimensionality means that the set of measured variables (indicators) can be explained by only one underlying construct” (Hair et al., 2013, p.606).

²⁷ See Table 4.10 under the construct validity measurement for the Fitness Index used in this research.

be confirmed in that research context. Since in this research has six constructs,²⁸ and the scales were developed, this process could be argued to be important.

CFA also involved the validation²⁹ process of the constructs. Each measurement model is suggested to achieve convergent validity, constructs validity³⁰ and discriminant validity (Awang, 2012b). The summaries of requirements are presented in Table 4.9. The validation of the measurement model depends on two aspects: 1) establishing an acceptable level of Goodness-of-Fit (GOF)³¹ of measurement model; and 2) examining the construct's validity (Hair et al., 2013). The model fit is measured by the GOF, which can be broken down into three general groups: absolute measures, incremental measures and parsimonious fit measures (Hair et al., 2013). Table 4.9 illustrates the criteria of fitness indexes and the acceptance level that had been chosen by this research. It is required to report at least one index from each category (Awang, 2012b; Hair et al., 2013).

²⁸ Refer Table 4.6.

²⁹ *"The ability of instrument to measure what it supposed to be measured for a construct."* (Awang, 2012b, p.48).

³⁰ *"Extent to which a set of measured variables actually represent the theoretical latent construct they are design to measure"*(Hair et al., 2013, p.543).

³¹ *"GOF is the measure indicating how well a specified model reproduces the covariance matrix among indicator variables"* (Hair et al., 2013, p. 544).

Table 4.11: Summary of Goodness-of-Fit Indexes

Category	Name of Index	Index Full Name	Level of Acceptance
Absolute Fit^a	Chisq (X^2) ^{a-a}	Discrepancy Chi Square	$P > 0.05$
	RMSEA	Root Mean Square of Error Approximation	RMSEA < 0.08 Range 0.05 to 0.1 is acceptable
Incremental Fit^b	CFI	Comparative Fit Index	CFI > 0.90
Parsimonious Fit^c	Chisq/df (X^2/df)	Chi Square/ Degrees of Freedom	Chisq/df (X^2/df) < 5.0

Sources: Browne & Cudeck (1992) and Awang (2012b).

Note: ^a This is the direct measure of how well the model specified fits between theory and sample data (Hair et al., 2013).

^{a-a} According to Hair et al., (2013), X^2 in this measurement is referred to the Chi-Square GOF, which the only statistical test of difference between matrices in SEM represented by this equation: $X^2 = (N - 1)$ (observed sample covariance matrix – SEM estimated covariance matrix), which N is the overall sample size. The fit of the proposed theory into the reality is represented by non-significant value of X^2 . The greater value means that the estimated model and observed model are expecting to fit each others.

^b This access the how the estimate model well fit the relative to some alternative baseline model (Hair et al., 2013).

^c This provide information about which among a set of competing model fit their complexity (Hair et al., 2013).

Table 4.12: Summary of Validity Assessments

Validity	Measurement
Convergent Validity	1. All items in the measurement model are statistically significant 2. It is verified by computing the Average Variance Extracted (AVE) ^a for each constructs and the value should be 0.5 or higher.
Construct Validity	1. The GOF ^b for a construct achieved the required level.
Discriminant Validity	1. Delete or correlate pair as “free parameter estimate” the redundant items in the model in term of high Modification Indices (MI).

Sources: Awang (2012b, p.48 & 49).

Note: ^a AVE = total of the squared multiple correlations plus the total sum of each variable, then divides it by the number of factors in that variable.

^b See Table 4.9 for details.

Furthermore, it is important to test the reliability of the measurement model by assessing the latent construct. The reliability is assessed using the following criteria:

Table 4.13: Summary of Reliability Assessments

Reliability	Measurement
Internal Reliability	1. Achieved when Cronbach's Alpha value ≥ 0.7 or; 2. "Corrected Item-Total Correlation" value ≥ 0.3
Construct Reliability	1. If CR ^a value ≥ 0.6
Average Variance Extracted (AVE)	1. AVE value ≥ 0.5

Sources: Pallant (2001, p.87) and Awang, (2012b, p.48 & 49).

Note: ^a Calculated by formula: $CR = (\sum K)^2 / [(\sum K)^2 + (\sum 1 - K^2)]$, which K = Factor loading of every item, n = number of items in a model.

The CFA data analyses are presented in Chapter 5.

4.4.1.1.2 Structural Equation Modelling (SEM)

After establishing and assessing the measurement model to confirm satisfactions on unidimensionality, reliability and validity requirements, only then can SEM be performed.

SEM is implemented to analyse the inter-relationships among multiple variables in a model: used as the analytical tool in the modelling stage (Awang, 2012b). The SEM technique employs a combination of quantitative data and correlational or causal assumptions about the model. This research chose to use SEM because the first generation statistical (1G) technique (i.e. multiple regression, factor analysis, discriminant analysis) can only examine a single relationship at a time, although it allows multiple dependent variables (Hair et al., 2013, p.610).

Equally, SEM is the second-generation (2G) statistical technique used to analyse the complex causal modelling, for instance in behavioural research, in contrast to first-generation (1G) such as PLS (Lowry & Gaskin, 2014). SEM is also capable of dealing with the following requirements (Awang, 2012b, p. 14):

1. Running the Confirmatory Factor Analysis (CFA)
2. Analysing multiple regression model simultaneously
3. Analysing regression with multi-collinearity problems
4. Analysing the path analysis with multiple dependents
5. Estimating the correlation and covariance in a model
6. Modelling the interrelationship among variables in a model

Further, it also argued that SEM offered a robust solution as the equations in the model are running simultaneously and interdependently (Lowry & Gaskin, 2014). In other words, a truer picture of the interdependent relationships in a complex theoretical model could be represented. SEM is also the statistical methodology on hypothesis-testing that takes a confirmatory approach rather than developing, which presents the causal effect by a series of structural (Byrne, 2010, p.3). SEM can transform the CFA from a correlational relationship to a structural model relationship (Hair et al., 2013, p.610).

According to Awang, (2012b), there are several types of constructs in SEM, some of which are reflective construct, formative construct and second order construct. These are summarised as follows:

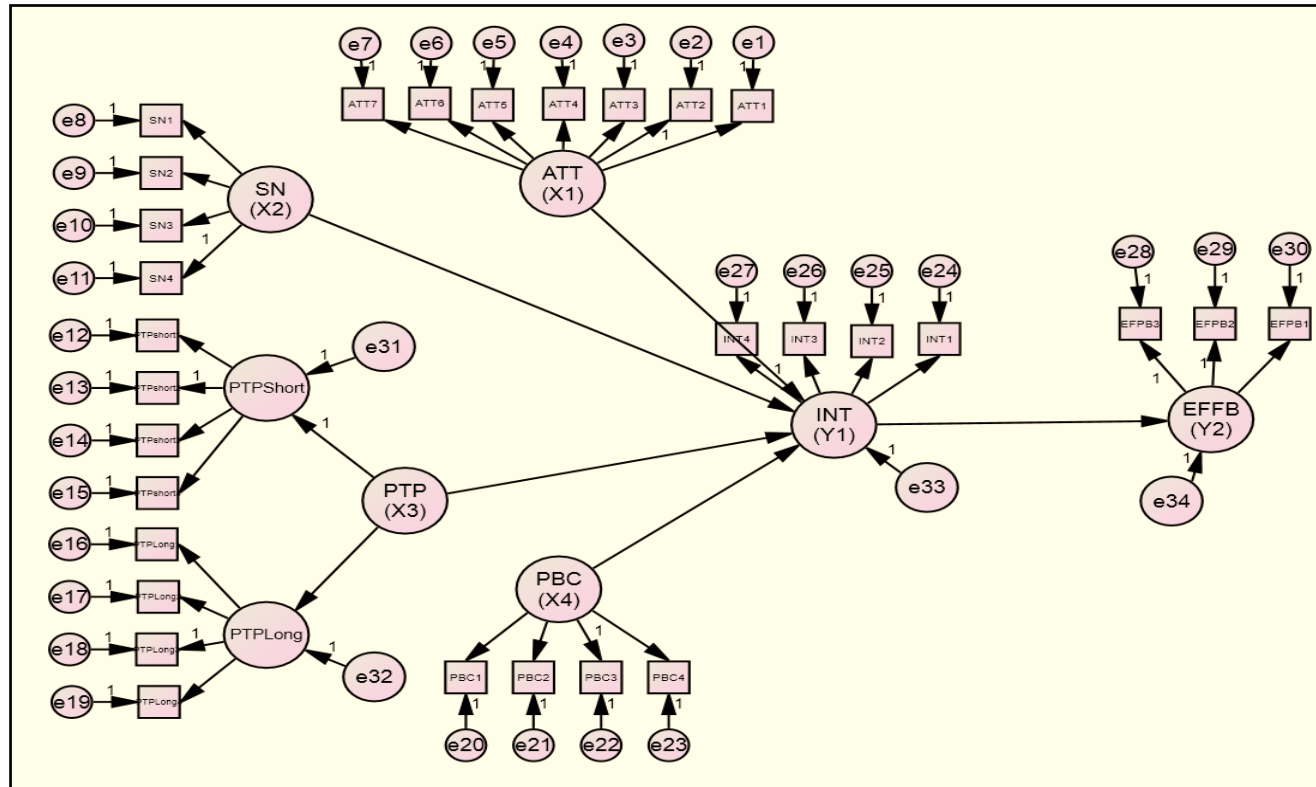
Table 4.14: Several Types of Constructs in SEM

Type of constructs	Descriptive	References
Reflective Construct	Reflective construct is the latent construct that is represented on its item. Usually the construct is measured through several items in a questionnaire.	(Gefen, Straub & Boudreau, 2000; Awang, 2012b)
Formative Construct	Formative construct is the latent construct that is formed by some variables. There are no measurement errors since it is directly measured by observed variables.	
Second Order Construct	Second order construct is the construct that consists of a few first order constructs.	(Awang, 2012b)

Sources: Gefen, Straub & Boudreau (2000) and Awang (2012b).

As shown in the proposed model (Figure 4.7), there are two types of constructs in the model, namely main constructs and sub constructs. Attitude, subjective norms, perceived behaviour control, propensity to plan, intention and emergency fund formation behaviour are the main constructs in the model. On the other hand, propensity to plan short-term and propensity to plan long-term are the second order constructs in the model.

Figure 4.5: Proposed Model of This Research (Direct Effect towards Intention)



Note: This path diagram represents the proposed model in this research, which is basically drawn for the transformation of the conceptual framework in this research into the forms of modelling. The items of the construct in this model are all shown before the EFA procedure. This model is presented to demonstrate the basis theory behind the research conceptual framework. The actual model testing is presented in Chapter 6

The model can be summarised in terms of two main separate linear equations, as follows:

$$\text{EFFB} = \text{INT} + e_{34} \dots (1)$$

$$\text{INT} = \text{ATT} + \text{SN} + \text{PTP} + \text{PBC} + e_{33} \dots (2)$$

Where:

INT = Intention

EFFB = Emergency fund formation behaviour

ATT = Attitude

SN = Subjective norms

PTP = Propensity to plan – Propensity to plan short-term (PTPShort) & propensity to plan long-term (PTPLong)

PBC = Perceived behaviour control

e_{33} & e_{34} = Residual

e = Measurement error

The goal of SEM is to test the simultaneous relationships, represented by multiple relationships, and it also measures the fitness³² of the overall model. The researcher must decide between one of two options: whether to accept or reject the entire model (Hair et al., 2013).

To use SEM, the strong theoretical basis for measurement and structural model is needed (Hair et al., 2013). This research framework³³ has adopted the theory of planned behaviour by Ajzen (1991) with the additional factor of propensity to plan that was based on the literature by Lynch Jr. et al. (2010). Thus, SEM was used deliberately in this research to analyse the hypothesis that is testing the direct effect and mediation effect between constructs. The procedure was run using *AMOS* (version 20.0) software. The analysis process is discussed further in Chapter 6.

4.4.1.1.3 Non-Parametric Test

As presented in Figure 4.5 above, to answer the third and fourth research questions³⁴, a Non-Parametric technique was adopted in this thesis, i.e. the *Pearson's Chi-square* test. It has been established that researchers may use the Non-Parametric technique if their data is measured on a nominal (categorical) and ordinal (ranked) scale (Pallant, 2013, p.221). In this research, the associated relationship between nominal data was analysed using Pearson's Chi-square test. These are discussed later in Chapters 7 and 8.

The cross-tabulation was used to divide groups of subjects into certain subgroups, such as male and female respondents, and to explore the behaviour of each subgroup. In this

³² See Table 4.9 for details.

³³ See Figure 4.3.

³⁴ See Section 4.1 for details of the research questions.

level, the clearest trends could be found in the relationship between subgroups. Pearson's Chi-square test was then used to evaluate the significant associations between the nominal data.

4.4.2 Analysing Interview Data

The interview used open-ended questions. The analysis of the data was carried out using a word-based analytical method. Word analysis can be used to identify concepts or actions and to identify similarities in responses between individuals (Jackson & Trochim, 2002). This research analyses both textual data from the questionnaire and verbatim text from the extended survey interview using the Theme Identified Technique. According to Ryan & Bernard (2003), the technique involves three main processes: 1) looking for repetition; 2) looking for similarities and differences; and 3) cutting and sorting. This technique is further argued to be suitable in analysing either textual data, verbatim text or non-textual text, such as sound images and objects. All of these procedures were carried out using the ATLAS.ti (version 7) software.

4.5 Chapter Summary

In conclusion, this chapter outlined the questions, design and data collection method of this research. The sample was university students in Malaysia between the ages of 18 and 30. The online survey was carried out to identify those who are currently holding an emergency fund; including an online questionnaire and survey interview. The convenience sampling method was used to reach this group and the ethical parameter of the research was outlined.

This chapter also discussed the conceptual framework of this research and the hypotheses that are to be tested. In addition, this research demonstrated the details of the questionnaire-development process and also explained the involvement of the item reduction procedure (EFA). In addition, this chapter explained the overall data collection and data analysis procedures that had been used in this research.

CHAPTER 5

RESEARCH METHODOLOGY 2: CONFIRMATORY FACTOR ANALYSIS

5.0 Introduction

This chapter presents the descriptive analysis results for the questionnaire and followed by the Confirmatory Factor Analysis (CFA) of measurement model procedure.

5.1 Descriptive Analysis: Quantitative (Questionnaire)

The first part of this chapter presents the characteristics of students who responded to the online questionnaire as represented by the full sample of data collection. 91 respondents answered the questionnaire. However, after data screening, only 86 responses were usable for this research. Three respondents were excluded because the respondents were over 30 years old and two other respondents had no emergency fund at all. Respondents were instructed to answer all questions, as all the questions were mark as mandatory. However, respondents were welcome to withdraw from the questionnaire in any stage; as the survey was online and until the send button was pushed, it was classed as not proceeded.

Characteristics such as gender, age, level of education, educational background, geography, marital status, occupation and dependency on financial aid are discussed in this section. All respondents included had stated that they had performed one or both of these financial activities (i.e. savings and investments) specifically for emergency preparation. The percentage and frequency distribution for all respondents are provided in the tables contained in the subsections of this chapter.

5.1.1 Demographic Background

Table 5.1: Respondent's Demographic Background

Demographic Background		Frequency	Percentage
Gender	Male	26	30.2
	Female	60	69.8
Age	18–21	34	39.5
	22–25	39	45.3
	26–30	13	15.1
Level of Education	Diploma/Certificate	20	23.3
	Degree	59	68.6
	Postgraduate	7	8.1
Educational Background	Business/Accounting	23	26.7
	Sciences	36	41.9
	Engineering	14	16.3
	Management	4	4.7
	Language	2	2.3
	Law	1	1.2
	Others	6	7.0
Region	Northern region	19	22.1
	Central region	36	41.9
	Southern region	9	10.5
	East Coast region	21	24.4
	Borneo	1	1.2
Marital Status	Single	77	89.5
	Married	9	10.5
Job/Occupation	Part-time student	15	17.4
	Part-time worker and full-time student	8	9.3
	Full-time student	63	73.3
Financial Aid	Dependent	56	65.1
	Independent	30	34.9

Table 5.1 summarises the backgrounds of the respondents. Respondents were mostly female and in degree level education. More than 50% of the respondents were studying Science and Engineering courses. In terms defining respondents by their place of living,

Malaysia is divided into five main regions,³⁵ namely Central region, Northern region, Southern region, East Coast region and Borneo. Table 5.1 indicates that the highest number of respondents live in the Central region (41.9%). Nevertheless, apart from that, respondents are drawn from across the country. Most respondents were single (89.5%) and only 10.5% of the respondents who answered the questionnaire were married. The largest proportions of the respondents were full-time students (73.3%). Finally, the students that were dependent on financial aid were 65.1% of this research sample.

5.1.2 Profile Analysis of the Respondents

This section discusses the crosstabulation analysis of the respondents from the questionnaire. To define the characteristics of young student adults in this research, the age categories of respondents were compared in relation to their level of education, educational background, region, marital status, job/occupation and financial aid. This was undertaken to understand and identify any differences in characteristics relating to the categories listed above. Fisher's Exact Test was used to assess the relationship between age and the above characteristics. As suggested by Pallant (2001, p.288), Fisher's Exact Test need to be used rather than Chi-square if the researcher has a 1 by 2 or a 2 by 2 table which have less than 10 expected frequency.

³⁵ The five regions are as follows: Northern region (Kedah, Penang, Perak and Perlis), Central region (Kuala Lumpur, Selangor and Negeri Sembilan), Southern region (Malacca and Johor), East Coast region (Pahang, Terengganu and Kelantan) and Borneo (Sabah, Sarawak and Labuan).

5.1.2.1 Profile of Respondents by Level of Education

Table 5.2: Crosstabulation for Age and Level of Education

			Level of Education			Total
			Diploma/ Certificate	Degree	Postgraduate	
Age Categories	18–21	Count	14	20	0	34
		% of Total	16.3%	23.3%	0.0%	39.5%
	22–25	Count	4	33	2	39
		% of Total	4.7%	38.4%	2.3%	45.3%
	26–30	Count	2	6	5	13
		% of Total	2.3%	7.0%	5.8%	15.1%
	Total	Count	20	59	7	86
		% of Total	23.3%	68.6%	8.1%	100.0%

Fisher's Exact Test (n=86), 21.883, p=0.000

As shown in Table 5.2, respondents were predominantly degree-level students aged between 22 and 25 years old (38.4%). The Fisher's Exact Test at 0.000 levels of significant shows that there is a relationship between age categories and levels of education.

5.1.2.2 Profile of Respondents by Educational Background

Table 5.3: Crosstabulation for Age and Education Background

		Educational Background							Total	
		Business/ accounting	Sciences	Engineering	Management	Language	Others	Law		
Age Categories	18–21	Count	10	16	4	1	2	0	1	34
		% of Total	11.6%	18.6%	4.7%	1.2%	2.3%	0.0%	1.2%	39.5%
	22–25	Count	8	17	8	3	0	3	0	39
		% of Total	9.3%	19.8%	9.3%	3.5%	0.0%	3.5%	0.0%	45.3%
	26–30	Count	5	3	2	0	0	3	0	13
		% of Total	5.8%	3.5%	2.3%	0.0%	0.0%	3.5%	0.0%	15.1%
	Total	Count	23	36	14	4	2	6	1	86
		% of Total	26.7%	41.9%	16.3%	4.7%	2.3%	7.0%	1.2%	100.0%

Fisher's Exact Test (n=86), 15.040, p=0.148

Table 5.3 shows most of the respondents who form the emergency fund are from a science background in term of their education: the majority were 19.8% of respondents aged between 22 and 25 years old. However, there is no significant statistical difference between age categories and educational background. The computed Fisher's Exact Test indicated a 0.148 level of significance.

5.1.2.3 Profile of Respondents by Region

Table 5.4: Crosstabulation for Age and Region

		Region					Total	
		Northern region	Central region	Southern region	East Coast region	Borneo		
Age Categories	18–21	Count	6	13	5	10	0	34
		% of Total	7.0%	15.1%	5.8%	11.6%	0.0%	39.5%
	22–25	Count	12	13	3	11	0	39
		% of Total	14.0%	15.1%	3.5%	12.8%	0.0%	45.3%
	26–30	Count	1	10	1	0	1	13
		% of Total	1.2%	11.6%	1.2%	0.0%	1.2%	15.1%
	Total	Count	19	36	9	21	1	86
		% of Total	22.1%	41.9%	10.5%	24.4%	1.2%	100.0%

Fisher's Exact Test (n=86), 15.451, p=0.723

Table 5.4 shows that most respondents aged 18–21 and 22–25, representing 15.1% respectively, had an emergency fund and were currently studying at the universities in the central region of Malaysia. However, there were no significant statistics on the relationship between age categories and regions. Fisher's Exact Test indicated a 0.723 level of significance. Thus, any area in which respondents are currently staying does not result in differences across the age categories.

5.1.2.4 Profile of Respondents by Marital Status

Table 5.5: Crosstabulation for Age and Marital Status

			Marital Status		Total
			Single	Married	
Age Categories	18–21	Count	34	0	34
		% of Total	39.5%	0.0%	39.5%
	22–25	Count	38	1	39
		% of Total	44.2%	1.2%	45.3%
	26–30	Count	5	8	13
		% of Total	5.8%	9.3%	15.1%
	Total	Count	77	9	86
		% of Total	89.5%	10.5%	100.0%

Fisher's Exact Test (n=86), 27.820, p=0.000

The respondents were mostly single between 22 and 25 years old. The statistical analysis shows that there is a relationship between age categories and marital status. The computed Fisher's Exact Test indicates a 0.000 level of significance.

5.1.2.5 Profile of Respondents by Job/Occupation

Table 5.6: Crosstabulation for Age and Job/Occupation

			Job/Occupation			Total
			Student	Part-time Worker, Student	Part-time Student	
Age Categories	18–21	Count	31	3	0	34
		% of Total	36.0%	3.5%	0.0%	39.5%
	22–25	Count	32	4	3	39
		% of Total	37.2%	4.7%	3.5%	45.3%
	26–30	Count	0	1	12	13
		% of Total	0.0%	1.2%	15.1%	15.1%

		Job/Occupation			Total
		Student	Part-time Worker, Student	Part-time Student	
Total	% of Total	0.0%	1.2%	14.0%	15.1%
	Count	63	8	15	86
	% of Total	73.3%	9.3%	17.4%	100.0%

Fisher's Exact Test (n=86), 49.596, p=0.000

Table 5.4 shows the job/occupation of the respondents. It reveals that the majority of those between 18 and 25 years old were full-time students. It also shows that on other site, those aged between 26 and 30 years old were part-time students. There were significant statistics to show the relationship between age categories and their job/occupation. Fisher's Exact Test was found at a 0.000 level of significance.

5.1.2.6 Profile of Respondents by Financial Aid

Table 5.7: Crosstabulation for Age and Financial Aid

			Dependent/ Independent		Total
			Dependent	Independent	
Age Categories	18–21	Count	26	8	34
		% of Total	30.2%	9.3%	39.5%
	22–25	Count	26	13	39
		% of Total	30.2%	15.1%	45.3%
	26–30	Count	4	9	13
		% of Total	4.7%	10.5%	15.1%
	Total	Count	56	30	86
		% of Total	65.1%	34.9%	100.0%

Fisher's Exact Test (n=86), 8.198, p=0.014

As explained before, respondents were also asked whether or not they received financial aid from their family or friends. Table 5.7 shows that, overall, the respondents in the 18–21 and 22–25 year age groups were dependent on financial aid. However, 15.1% of those in the 22–25 year age group old also claimed to be independent of financial aid. The Fisher’s Exact Test was computed and shows a significant value at 0.014. This suggests that there is a relationship between age categories and financial aid among young student adults that hold an emergency fund.

In conclusion, the results show that there are significant relationships between age categories and levels of education, marital status, job/occupation and level of financial aid. However, there was no relationship between age categories and educational background and regions.

5.2 Measurement Model: Confirmatory Factor Analysis (CFA)

This section essentially details step 4 and step 5 of the scale development process proposed by Hinkin (1998)³⁶, which equates to stage 1 to 4 of The Six–Stage Process for Structural Equation Modelling proposed by (Hair et al., 2013)³⁷. In general, this chapter purposely represents the results of testing the measurement theory validation with CFA procedure.

According to Awang (2012b), a researcher can choose to perform the CFA procedure from either a pooled or individual method of assessment. In this research, pooled assessment was applied to all of the constructs. The pooled measurement model is about combining all the measurement models together and CFA procedure is performed once

³⁶ See Figure 4.4 in Chapter 4

³⁷ See Figure 4.6 in Chapter 4

for all constructs. If the researcher found that there are constructs that have less than four items, pooled CFA is highly recommended over an individual CFA approach (Awang, 2012b). Pooled measurement could reduce poor practice when measuring just a single construct, since the GOF indices are designed to test more than a single construct at a time (Hair et al., 2013). They further argued that if the individual methods are selected, problems such as potential items cross loading between constructs are impossible to find.

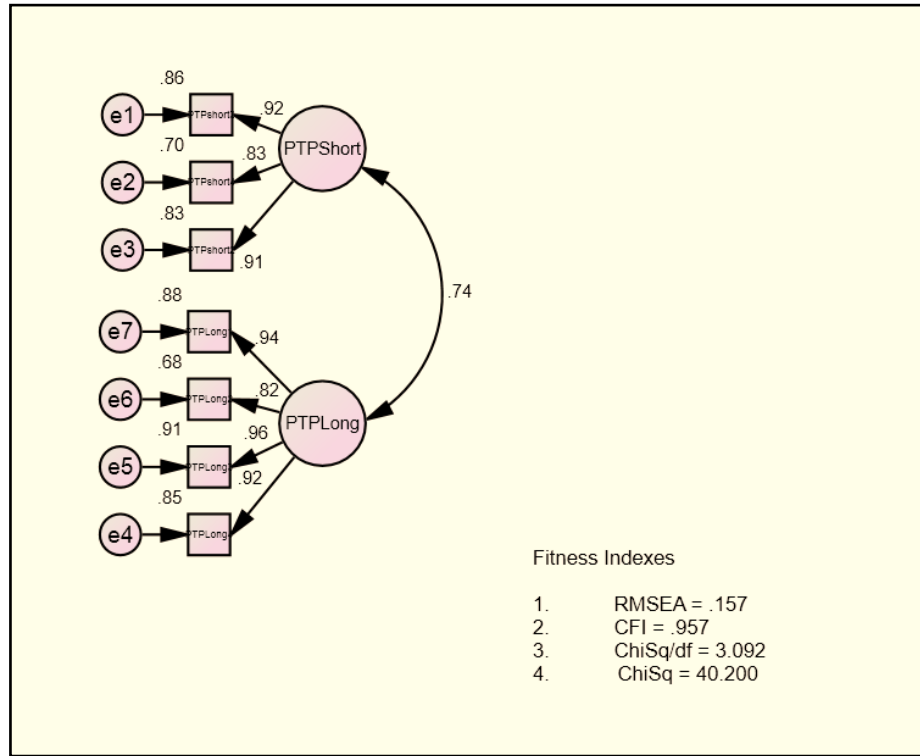
The suggested acceptance of standardised loading estimates for items varies. Hair et al., (2013) argued that the loading should be at least 0.5 or higher. This is similar to Awang (2012b), who argued that the loading should be 0.5 or higher for newly developed items and 0.6 for established items. Back to this research, since the items are developed, then an acceptable guideline of 0.5 for estimated standardised loading is followed.

Descriptions of constructing items in the CFA are presented in Appendix 7.

5.2.1 The Second Order Confirmatory Factor Analysis (CFA): Propensity to Plan

As discussed previously, the model in this research consists of second order constructs. Therefore, before running the CFA for all constructs, the second order CFA should first be run. This is important, as it ensures that all the items belong to the particular second order construct. Figure 5.1 shows the CFA results for the sub-constructs.

Figure 5.1: The CFA for the Sub-constructs



Note: The items labelled in the box correspond to those shown in the questionnaire, which represent measured variables. Latent constructs are shown with an oval [*Propensity to Plan Short Term* (PTPShort), and *Propensity to Plan Long Term* (PTPLong)]. Each measured variable has an error (e) associated with it. Two-headed connections show the covariance between constructs (Cov). One-headed connectors indicate a causal path from a construct to items and main-constructs to sub-construct.

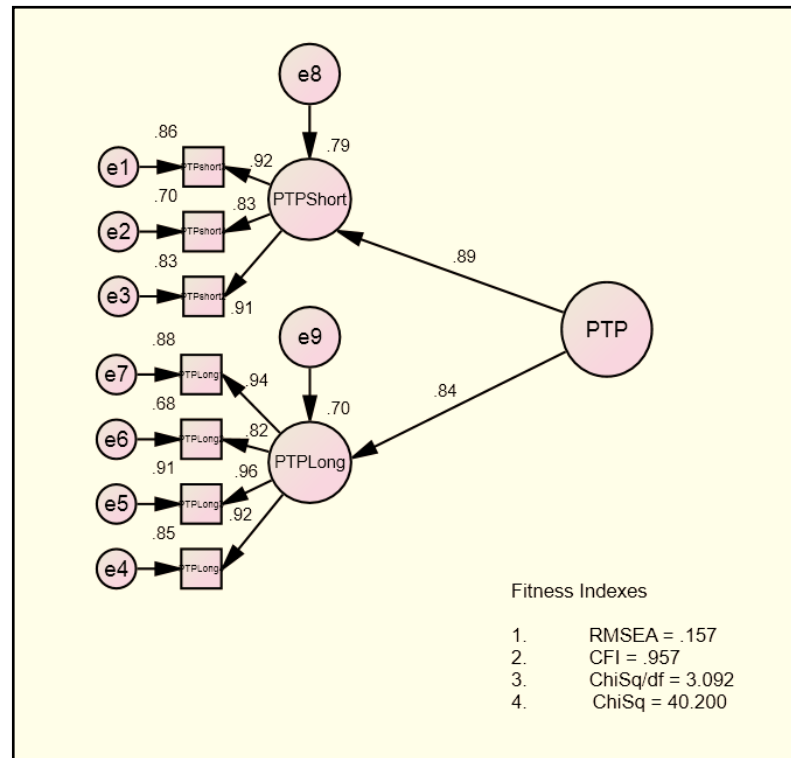
Firstly, the correlation between constructs must show less than 0.85 (Awang, 2012b).

Figure 5.1 indicates that the correlation between constructs is 0.74, which satisfies the suggested value.

After that, the measurement model will be presented as a sub-construct to the main constructs in order to perform the second order CFA procedure. In this research, PTPShort and PTPLong are theorised as the sub-constructs of PTP. Figure 5.2 (below) shows that the fitness indexes for RMSEA (0.157) did not achieve the required level, although the factor loadings for all items are above 0.6. Thus, redundancy items were

inspected via the modification indexes (MI). The redundancy items should be treated via two options: first, to delete; or second, to set “free parameter estimate” (Awang, 2012b, p.52).

Figure 5.2: Second Order CFA for Propensity to Plan Constructs



Note: The items labelled in the box correspond to those shown in the questionnaire, which represent measured variables. Latent constructs are shown with an oval [*Propensity to plan (PTP)*, *propensity to plan short term (PTPShort)*, and *propensity to plan long term (PTPLong)*]. Each measured variable has an error (e) associated with it. Two-headed connections show the covariance between constructs (Cov). One-headed connectors indicate a causal path from a construct to items and main-constructs to sub-construct.

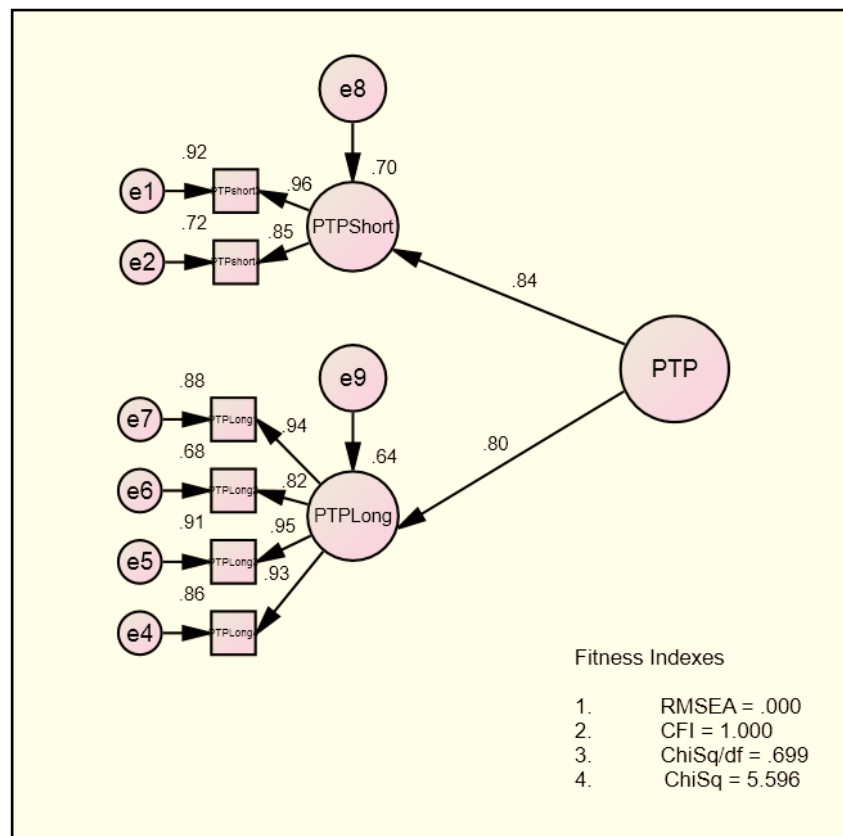
Only the highest MI value is presented in Table 5.8. The value of MI below 15.0 is still considered acceptable (Awang, 2012b, p.52). However in this case, e3 shows a correlation to e5 and e4. Therefore Item PTPShort2 is deleted.

Table 5.8: Modification Indexes Present the Covariance between Pair Items (Sub-construct)

			Modification Indexes	Par Change
e5	<-->	e3	13.323	.278
e4	<-->	e3	10.339	-.272

Figure 5.3 show that all fitness indexes achieved the required level. This is confirmed by the value for RMSEA (0.000), CFI (1.000) and ChiSq/df (7.000). All the factor loadings indicate a value above 0.6, which is above the accepted value.

Figure 5.3: The Factor Loading for Second Order and First Order of Propensity to Plan

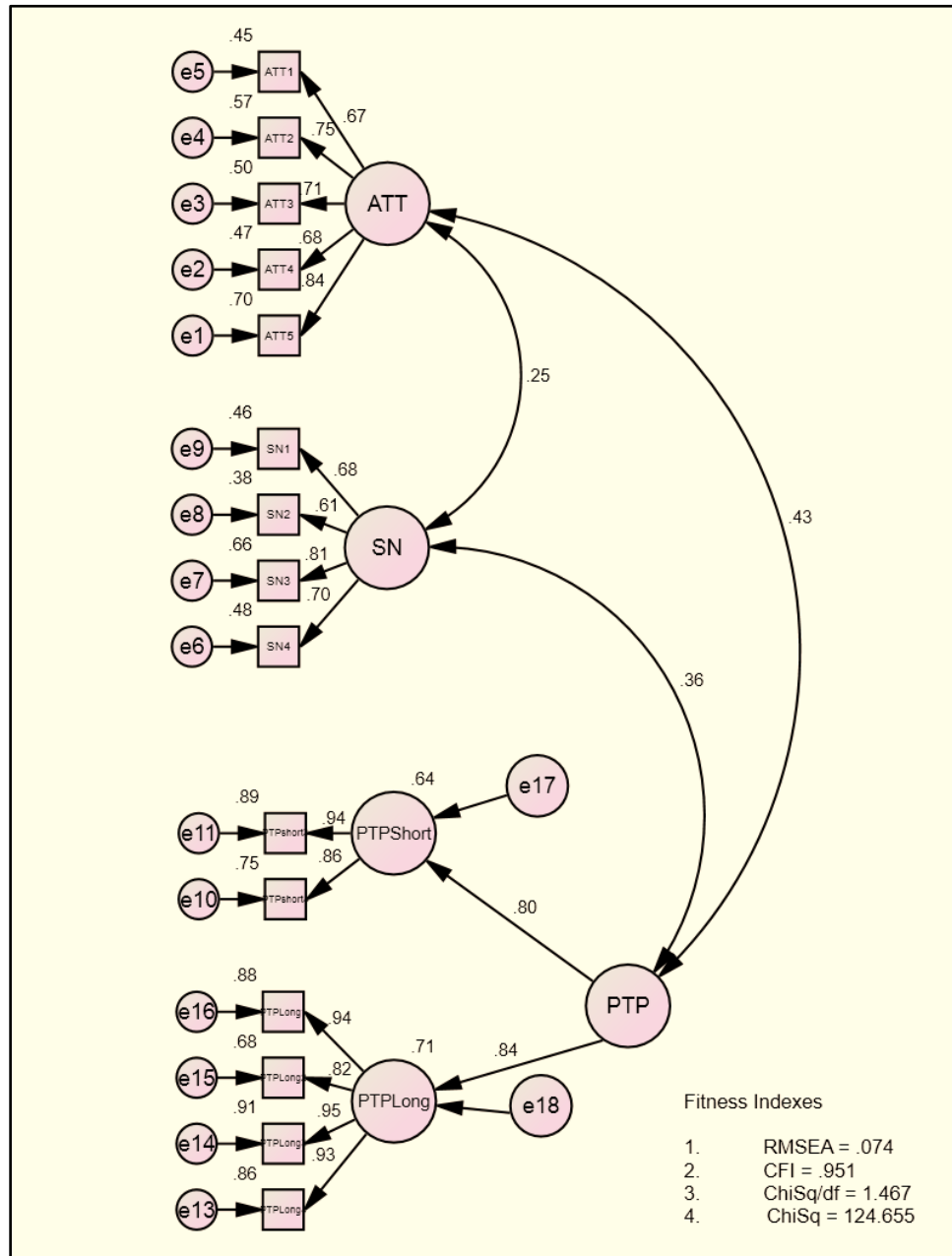


Note: The items labelled in the box correspond to those shown in the questionnaire, which represent measured variables. Latent constructs are shown with an oval [*Propensity to plan (PTP)*, *propensity to plan short term (PTPShort)*, and *propensity to plan long term (PTPLong)*]. Each measured variable has an error (e) associated with it. Two-headed connections show the covariance between constructs (Cov). One-headed connectors indicate a causal path from a construct to items and main-constructs to sub-construct.

The fitness indexes for the second order have achieved the required level. Thus, no item deletion and modification was required. The figure above shows the propensity to plan construct loads well on its two sub-constructs. The factor loading of PTPShort and PTPLong was 0.84 and 0.80 respectively. Furthermore, R^2 for all sub constructs is high (0.70 and 0.64), reflecting that the contribution of propensity to plan on its two constructs is good. In other words, the theory of propensity to plan that was defined by this research is well supported, consisting of two sub-constructs.

5.2.2 CFA: Attitude, Subjective Norms and Propensity to Plan

Figure 5.4: Pooled CFA Measurement Model for Attitude, Subjective Norms and Propensity to Plan



Note: The items labelled in the box correspond to those shown in questionnaire, which represent measured variables. Latent constructs are shown with an oval [Attitude (ATT), Subjective Norms (SN), Propensity to Plan (PTP), Propensity to Plan Short Term (PTPShort), and Propensity to Plan Long Term (PTPLong)]. Each measured variable has an error (e) associated with it. Two-headed connections show the covariance between constructs (Cov). One-headed connectors indicate a causal path from a construct to items and main-constructs to sub-construct.

After running the CFA for second order construct (propensity to plan), the construct can then be included in the CFA measurements for all main constructs. Figure 5.4 shows the results of the pooled measurement model for three constructs: namely attitude, subjective norms and propensity to plan. All the fitness indexes achieved the requirement. No modification of items is required. This is summarised in Table 5.9:

Table 5.9: Summary of the Fitness Indexes for Measurement Model

Category	Name of Index	Index Value	Comments
Absolute Fit	RMSEA	0.074	Required level is achieved
Incremental Fit	CFI	0.951	Required level is achieved
Parsimonious Fit	Chisq/df	1.467	Required level is achieved

Note: The required level for Fitness Indexes were: RMSEA < 0.08; CFI > 0.90; (X^2/df) < 5.0 (see Table 4.9 for details)

Next, the reliability and validity of the constructs was measured. Table 5.10 summarises the reliability assessment for all constructs.

To summarise, the measurement model for attitude, subjective norms, and propensity to plan complies with the requirements for internal reliability, construct reliability and average variance extracted (AVE), as previously discussed in Table 4.10 and Table 4.11. As internal reliability is measured based on the Alpha value ≥ 0.70 , all constructs show as meeting the required level. Again, all constructs achieved the requirement value for CR ≥ 0.6 and AVE ≥ 0.5 .

The validity assessments show that the model satisfies both convergent and constructs validity. According to Awang (2012b), discriminant validity is not achieved if the

correlation value between two exogenous constructs is greater than 0.85. Based on Figure 5.4, Table 5.11 summarises the discriminant validity assessments for all constructs. As a result, all values were below 0.85, hence the discriminant validity was satisfied.

Table 5.10: Reliability Assessment Summaries for All Constructs

Construct	Item	Factor Loading	Cronbach Alpha	Composite Reliability (CR) ^a	Average Variance Extracted (AVE) ^b
ATT	ATT1	0.67	0.840	0.852	0.537
	ATT2	0.75			
	ATT3	0.71			
	ATT4	0.68			
	ATT5	0.84			
SN	SN1	0.68	0.790	0.795	0.495
	SN2	0.61			
	SN3	0.81			
	SN4	0.70			
PTP	PTPShort3	0.94	0.925	0.966	0.824
	PTPShort4	0.86			
	PTPLong1	0.94			
	PTPLong2	0.82			
	PTPLong3	0.95			
	PTPLong4	0.93			

Note: ATT (Attitude), SN (Subjective Norms), PTP (Propensity to Plan)

^a Calculated by formula: $CR = (\sum K)^2 / [(\sum K)^2 + (\sum 1 - K^2)]$, which K = factor loading of every item, n = number of items in a model.

^b AVE Calculated by formula: $AVE = \frac{\sum_{i=1}^n L_i^2}{n}$, where L^i represents the standardised factor loading, and i is the number of items. Then, n is the total of all squared standardised factor loadings divided by the number of items.

Table 5.11: Discriminant Validity Assessment Summaries for All Constructs

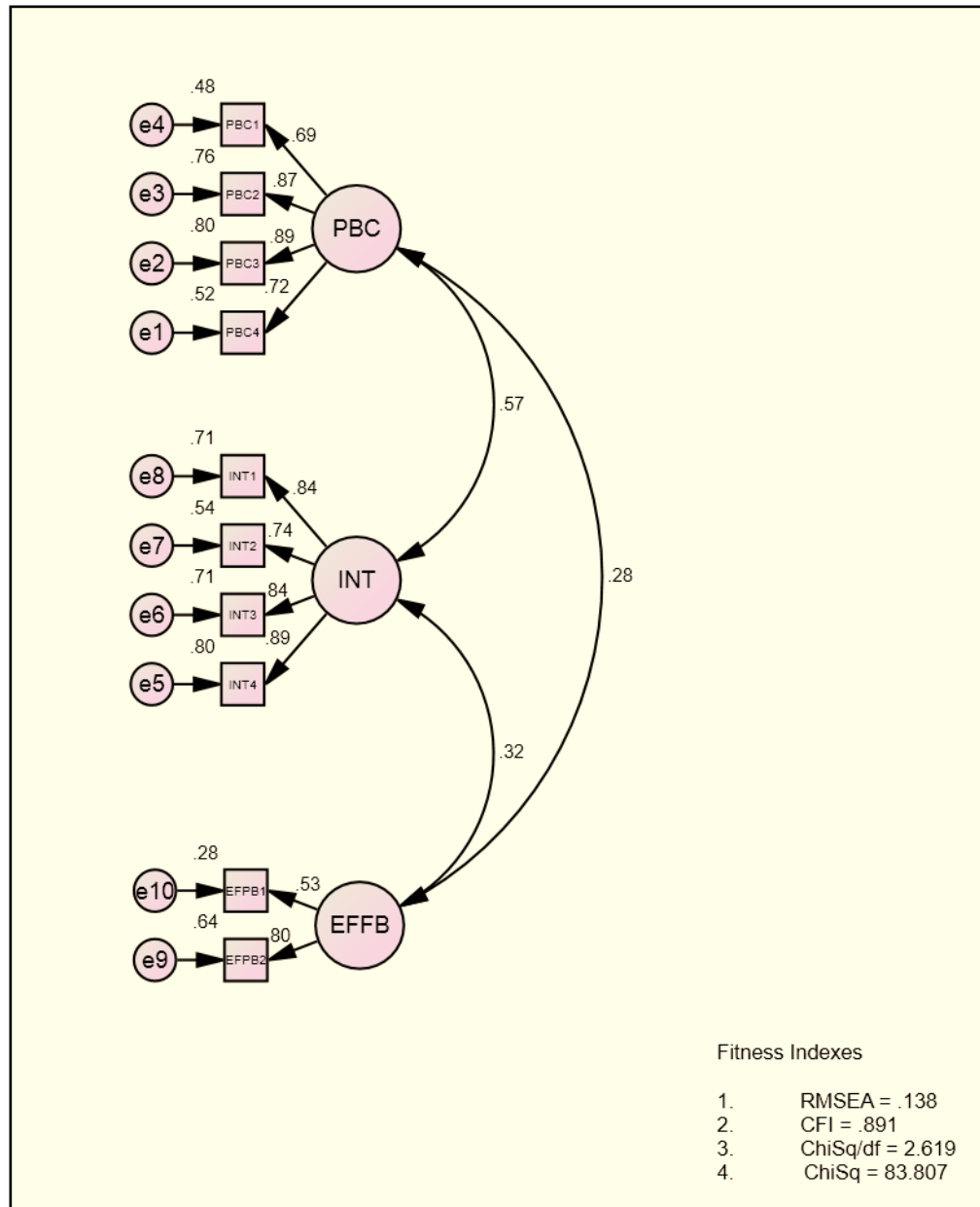
Construct	Attitude	Subjective Norms	Propensity to Plan
Attitude	1.000		
Subjective Norms	0.254	1.000	
Propensity to Plan	0.431	0.357	1.000

5.2.3 CFA: Perceived Behaviour Control, Intention and Emergency Fund Formation Behaviour

Figure 5.5 shows the results of the pooled measurement model for three constructs, namely perceived behaviour control, intention and propensity to plan.

In total, there are ten items in the model that measured perceived behaviour control (four items), intention (four items) and emergency fund formation behaviour (two items). Although the standardised factor loading for all items was above 0.5, which is the accepted factor loading for new developed items (Awang, 2012b), the Fitness Index for RMSEA was still below the required level (0.138). Thus, redundancy items were inspected through the Modification Indexes (MI).

Figure 5.5: Pooled CFA Measurement Model for Perceived Behaviour Control, Intention and Emergency Fund Formation Behaviour



Note: The items labelled in the box correspond to those shown in the questionnaire, which represent measured variables. Latent constructs are shown with an oval [*Perceived behaviour Control (PBC)*, *Intention (INT)*, and *Emergency Fund Formation Behaviour (EFFB)*]. Each measured variable has an error (e) associated with it. Two-headed connections show the covariance between constructs (Cov). One-headed connectors indicate a causal path from a construct to items and main-constructs to sub-construct.

Table 5.12 shows the covariance between pair items. Only the highest MI value is presented in the table. The value of MI below 15.0 is still considered acceptable. However, in this case, e4 shows a correlation towards e6 with a high MI value (17.898). Therefore Item PBC1 was deleted.

Table 5.12: Modification Indexes Presents the Covariance between Pair Items

			Modification Indexes	Par Change
e4	<-->	e6	17.898	.568
e3	<-->	e8	4.100	.322
e3	<-->	e5	7.685	-.367

Note: (e) indicates the residual in this measurement model. See Figure 5.5 for details.

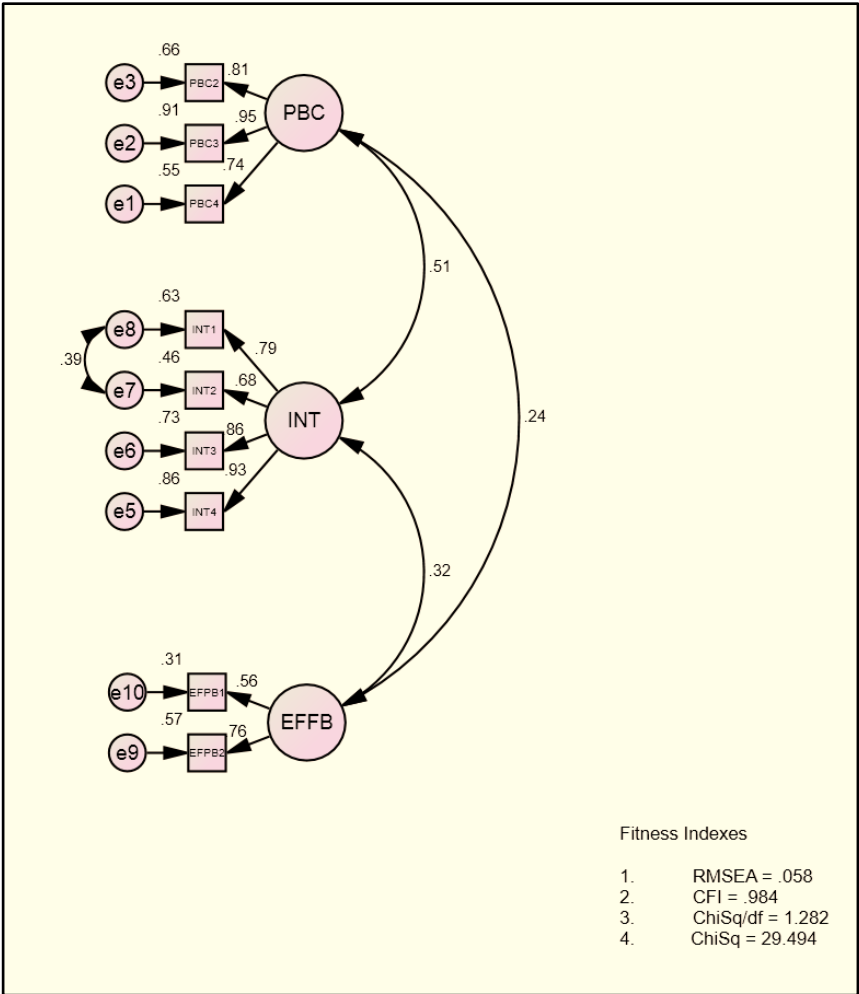
However, after the adjustment was made, the fitness index in the measurement model still did not achieve the required level, indicating that additional inspection was needed. It is recommended that modification of only one item is done at a time (Awang, 2012b). Table 5.13 shows the covariance between pair items before the second adjustment. From the table, it can be seen that e7 shows a correlation towards e8, representing the highest MI value. Therefore, this research chose to set these two correlated measurement errors of redundant items as a “free parameter” before running the new measurement model.

Table 5.13: Modification Indexes Presents the Covariance between Pair Items

			Modification Indexes	Par Change
e7	<-->	e10	5.262	-.716
e7	<-->	e8	8.099	.448
e5	<-->	e6	5.144	.193
e3	<-->	e8	4.752	.373
e3	<-->	e5	7.174	-.375

Note: (e) indicates the residual in this measurement model. See figure 5.5 for details.

Figure 5.6: Pooled CFA Measurement Model for Attitude, Subjective Norms and Propensity to Plan after Adjustments



Note: The items labelled in the box correspond to those shown in the questionnaire, which represent measured variables. Latent constructs are shown with an oval [*Perceived behaviour Control (PBC)*, *Intention (INT)*, and *Emergency Fund Formation Behaviour (EFFB)*]. Each measured variable has an error (e) associated with it. Two-headed connections show the covariance between constructs (Cov). One-headed connectors indicate a causal path from a construct to items and main-constructs to sub-construct.

After adjusting the redundant items, the fitness indexes achieved the required level (see Figure 5.6). The fitness index for the new measurement model is presented in Table 5.14.

Table 5.14: The Fitness Indexes for Measurement Model

Category	Name of Index	Index Value	Comments
Absolute Fit	RMSEA	0.058	Required level is achieved
Incremental Fit	CFI	0.984	Required level is achieved
Parsimonious Fit	Chisq/df	1.282	Required level is achieved

Note: The required level for Fitness Indexes were: RMSEA <0.08; CFI > 0.90; (X^2/df) < 5.0 (see Table 4.9 for details).

Furthermore, the reliability and validity of constructs was measured. Table 5.15 summarises the reliability assessment of the CFA procedure for these constructs.

Table 5.15: Reliability Assessment Summaries for All Constructs

Construct	Item	Factor Loading	Cronbach Alpha	Composite Reliability (CR) ^a	Average Variance Extracted (AVE) ^b
PBC	PBC1	Item deleted			
	PBC2	0.81	0.870	0.875	0.702
	PBC3	0.95			
	PBC4	0.74			
INT	INT1	0.79	0.894	0.890	0.673
	INT2	0.68			
	INT3	0.86			
	INT4	0.93			
EFFB	EFFB1	0.56	0.577	0.611	0.446
	EFFB2	0.76			

Note: PBC (Perceived Behaviour Control), INT (Intention), EFFB (Emergency Fund Formation Behaviour).

^a Calculated by formula: $CR = (\sum K)^2 / [(\sum K)^2 + (\sum 1 - K^2)]$, which K = factor loading of every item, n = number of items in a model.

^b AVE calculated by formula: $AVE = \frac{\sum_{i=1}^n L_i^2}{n}$, where L^i represents the standardised factor loading and i is the number of items. Then, n is the total of all squared standardised factor loadings divided by the number of items.

From evaluating the results, the measurement model for perceived behaviour control, intention and emergency fund formation behaviour all achieved the internal reliability, construct reliability and Average Variance Extracted (AVE). As internal reliability is measured based on the Alpha value ≥ 0.70 , EFFB constructs, however, show lower requirement level values. As according to Pallant (2001, p.87), if the Alpha value is less than 0.7 the researcher needs to decide whether to retain the items based on the results from the “Corrected Item-Total Correlation” column. If the values are less than 0.3, then researcher is recommended to delete the item. In this instance, the items in the EFFB constructs show the value to be over 0.3 respectively (see Table 5.16). The construct, then, was considered acceptable.

Table 5.16: Reliability Results for the Emergency Fund Formation Behaviour Construct

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation
Saving	4.40	9.489	.420	.177
Investment	6.98	5.576	.420	.177

In addition, the values of Cronbach Alpha for each of the constructs are: perceived behaviour control (0.870) and intention (0.894), which all achieved the minimum 0.70 value. Furthermore, all constructs achieved the minimum requirement value for CR ≥ 0.6 : perceived behaviour control (0.875), intention (0.890) and emergency fund formation behaviour (0.611). Moreover, all constructs also achieved the Average Variance Extracted (AVE) when value of AVE ≥ 0.5 . This shown by value of AVE for each construct: perceived behaviour control (0.702), intention (0.673) and emergency

fund formation behaviour (0.446) respectively. The value for AVE which nearly to 0.5 such emergency fund formation constructs is still acceptable as long as the CR value achieved the minimum requirement (Awang, 2012b).

Consequently, the validity assessment shows that the model achieved both convergent and construct validity. Based on Figure 5.6, Table 5.17 summarises the discriminant validity assessments for all constructs. As all values were below 0.85, the discriminant validity was achieved.

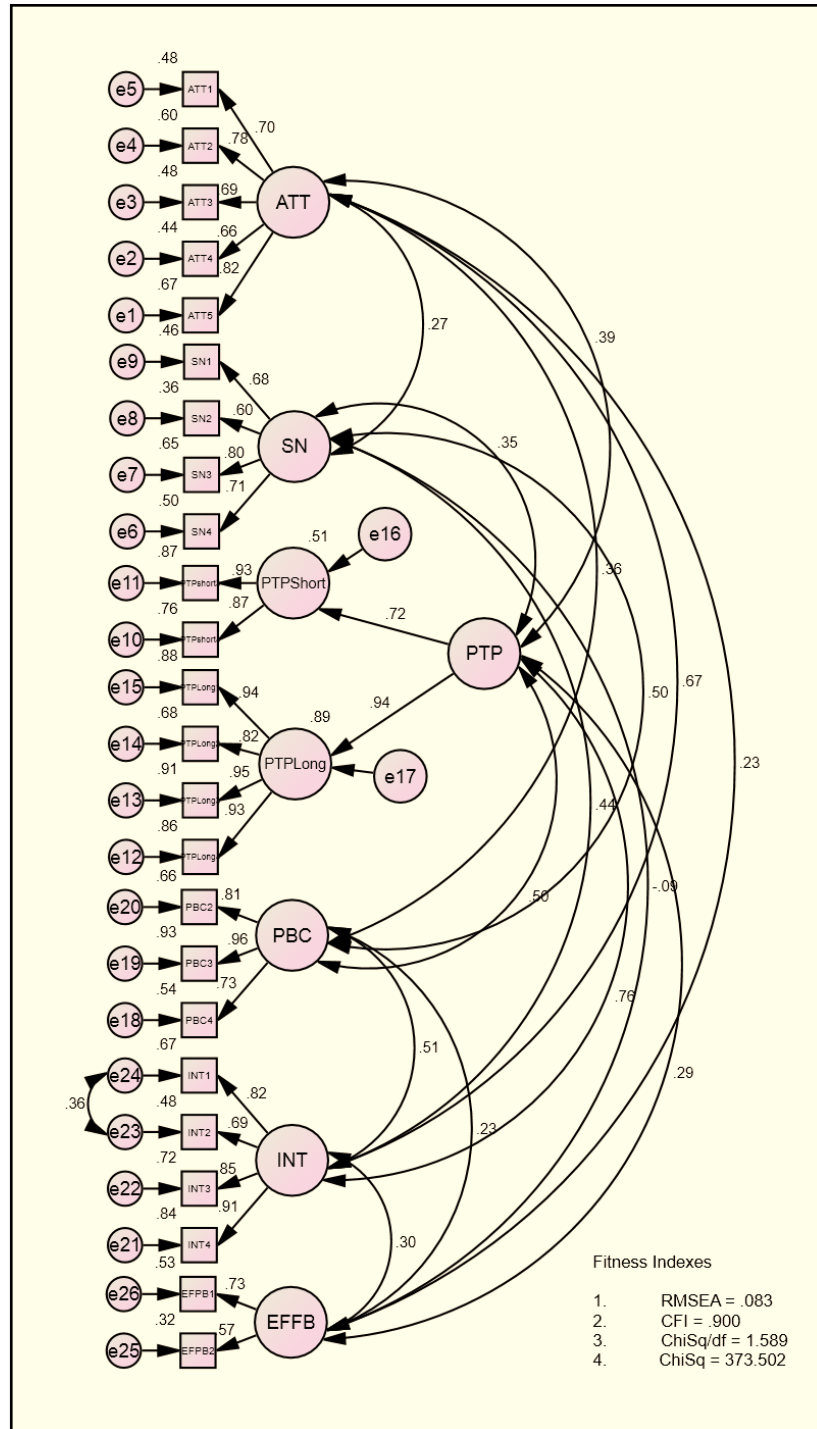
Table 5.17: Discriminant Validity Assessment Summaries for All Constructs

Construct	Perceived Behaviour Control	Intention	Emergency Fund Formation Behaviour
Perceived Behaviour Control	1.000		
Intention	0.508	1.000	
Emergency Fund Formation Behaviour	0.237	0.322	1.000

5.2.4 Confirmatory Factor Analysis for All Constructs

Figure 5.7 combines all constructs to run CFA simultaneously. The constructs were attitude, subjective norms, propensity to plan, perceived behaviour control, intention and emergency fund formation behaviour. This was undertaken in order to identify the issue that would arise when all constructs were allocated in a single measurement model.

Figure 5.7: CFA Measurement Model for All Latent Constructs



Note: The items labelled in the box correspond to those shown in questionnaire, which represent measured variables. Latent constructs are shown with an oval [Attitude (ATT), Subjective Norms (SN), Propensity to Plan (PTP), Propensity to Plan Short Term (PTPShort), and Propensity to Plan Long Term (PTPLong), Perceived behaviour Control (PBC), Intention (INT), and Emergency Fund Formation Behaviour (EFFB)]. Each measured variable has an error (e) associated with it. Two-headed connections show the covariance between constructs (Cov). One-headed connectors indicate a causal path from a construct to items and main-constructs to sub-construct.

Figure 5.7 indicates that the fitness index for RMSEA was still below the required level. Thus, inspecting items through the Modification Indexes (MI) identified redundancy items. Table 5.18 shows the covariance between pair items. As before, only a value of MI below 15.0 is considered acceptable. However in this case, e3 shows correlation towards e23 with a high MI value (17.553). Therefore item ATT3 has been deleted.

Table 5.18: Modification Indexes Presents the Covariance between Pair Items for All Constructs

			Modification Indexes	Par Change
e4	<-->	e9	5.091	.498
e3	<-->	e23	17.553	.866
e3	<-->	e6	4.168	.599
e2	<-->	e23	7.290	-.599

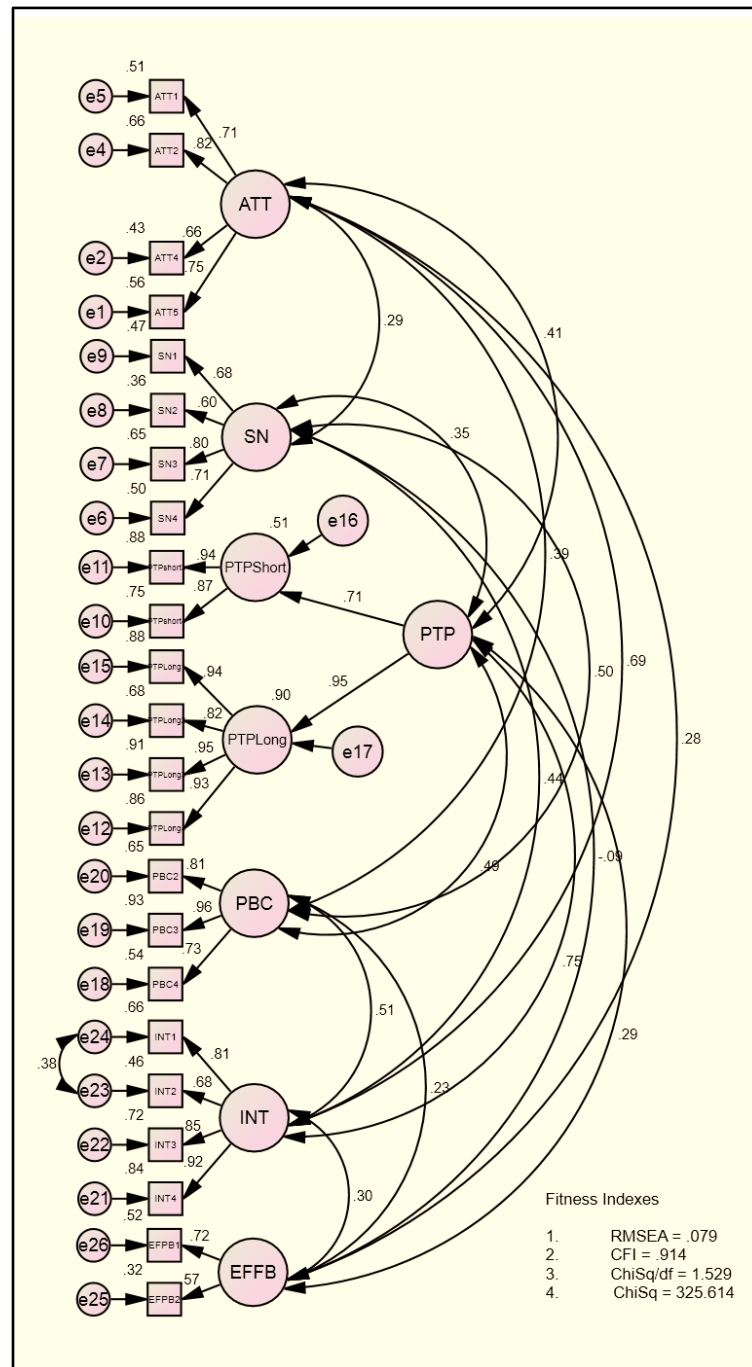
After adjusting the redundant items, the fitness indexes achieved its required level (see Figure 5.8). The value for RMSEA was 0.079, which achieved ≤ 0.08 . This shows that the model reached absolute fit. The value CFI (0.914) and X^2/df (1.529) represented incremental fit and parsimonious fit of the model. The summary of the fitness index for the new measurement model is presented in Table 5.19.

Table 5.19: The Fitness Indexes for Measurement Model

Category	Name of index	Index Value	Comments
Absolute Fit	RMSEA	0.079	Required level is achieved
Incremental Fit	CFI	0.914	Required level is achieved
Parsimonious Fit	Chisq/df	1.529	Required level is achieved

Note: The required level for Fitness Indexes were: RMSEA < 0.08 ; CFI > 0.90 ; (X^2/df) < 5.0 (see Table 4.9 for details).

Figure 5.8: CFA Measurement Model for all Latent Constructs after Deleted Item



Note: The items labelled in the box correspond to those shown in the questionnaire, which represent measured variables. Latent constructs are shown with an oval [Attitude (ATT), Subjective Norms (SN), Propensity to Plan (PTP), Propensity to Plan Short Term (PTPSHORT), and Propensity to Plan Long Term (PTPLong), Perceived behaviour Control (PBC), Intention (INT), and Emergency Fund Formation Behaviour (EFFB)]. Each measured variable has an error (e) associated with it. Two-headed connections show the covariance between constructs (Cov). One-headed connectors indicate a causal path from a construct to items and main-constructs to sub-construct.

Since only the attitude construct was modified, the reliability and validity of the attitude constructs was measured. This is because the other constructs remain as before. Table 5.20 shows a reliability assessment summary for the attitude construct.

Table 5.20: Reliability Assessment Summaries for All Constructs

Construct	Item	Factor Loading	Cronbach Alpha	Composite Reliability (CR) ^a	Average Variance Extracted (AVE) ^b
ATT	ATT1	0.67	0.816	0.826	0.544
	ATT2	0.75			
	ATT4	0.68			
	ATT5	0.84			
	ATT3	Item deleted			

Note: ATT (Attitude)

^a Calculated by formula: $CR = (\sum K)^2 / [(\sum K)^2 + (\sum 1 - K^2)]$, which K_i = factor loading of every item, n = number of items in a model.

^b AVE Calculated by formula: $AVE = \frac{\sum_{i=1}^n L_i^2}{n}$, where L^i represents the standardised factor loading, and i is the number of items. Then, n is the total of all squared standardised factor loadings divided by the number of items.

The result shows that the values of Cronbach Alpha for attitude construct (0.816) achieved the minimum requirement ≥ 0.7 . In addition, CR value was 0.826 and AVE value was 0.544 – both of which achieved the requirement. This indicates that this construct fulfilled its internal reliability requirement.

Moreover, the validity assessments of all constructs indicated that the model achieved both convergent and construct validity. Table 5.21 summaries the discriminant validity assessments for all constructs, as shown in Figure 5.8. All values were found to be below 0.85, indicating that discriminant validity had been achieved.

Table 5.21: Discriminant Validity Assessment Summaries for All Constructs

Construct	EFFB	INT	PBC	PTP	SN	ATT
EFFB	1.000					
INT	0.298	1.000				
PBC	0.228	0.511	1.000			
PTP	0.291	0.754	0.493	1.000		
SN	-0.088	0.437	0.496	0.348	1.000	
ATT	0.276	0.691	0.392	0.412	0.294	1.000

Note: EFFB (Emergency Fund Formation Behaviour), INT (Intention), PBC (Perceived Behaviour Control), PTP (Propensity to Plan), SN (Subjective Norms), ATT (Attitude).

5.2.5 Indication of Normality

There are several methods that could be used to check the normality. One of the methods is to check the skewness and kurtosis. Researchers need to confirm the absolute values of skewness and kurtosis. An absolute value of kurtosis ≥ 10.0 suggests there is a problem, and an absolute value of kurtosis > 20.0 indicates a more serious problem (Kline, 2011, p.63). Further it has been suggested that the recommended absolute value for skewness is < 3 and kurtosis is < 10 . In addition, Byrne (2010, p.104) argued that the data can be considered normal if the skewness is between -2 to +2 and kurtosis is between -7 and +7.

In relation to this, some researchers may be looking for the final multivariate score, rather than a normality assumption, as before (skewness and kurtosis), which may be argued not to follow the normality distribution requirement. Such as in the Table 5.22 which show highly significant non- normality value. This seems acceptable in such research areas as behavioural research (Curran, West & Finch, 1996). They further argued that, if a researcher used the maximum likelihood assumption as a method of

assumption, the structural assumption is accurate to test in a sample and shows the robust result. In relation, this research used a Maximum Likelihood Estimation (MLE)³⁸ procedure, and it can be argued that it produces a valid and stable result (Hair et al., 2013). This will be explained in later analysis.

Table 5.22 indicates the normality assessments of all of items in the constructs. As a results, the data skewness and kurtosis are within the acceptable range, as defined by Byrne (2010) and Kline (2011). Consequently, the measurement model for all constructs was fit in terms of its unidimensionality, validity and reliability, indicating that the measurement model achieved the point at which it was judged viable to proceed to the SEM analysis (Hair et al., 2013).

Table 5.22: Assessment of Normality Distribution for Items in the Respective Construct.

Variable	Min.	Max.	Skew.	C.R.	Kurtosis	C.R.
EFFB1	1.000	10.000	-.614	-2.324	-.330	-.625
EFFB2	1.000	10.000	.351	1.327	-1.195	-2.262
INT1	2.000	10.000	-.953	-3.607	1.167	2.209
INT2	2.000	10.000	-.426	-1.612	-.343	-.650
INT3	4.000	10.000	-.722	-2.732	-.131	-.248
INT4	4.000	10.000	-.736	-2.787	-.388	-.734
PBC2	1.000	10.000	-.507	-1.919	-.325	-.615
PBC3	2.000	10.000	-.432	-1.636	-.525	-.993
PBC4	1.000	10.000	-.351	-1.330	-.179	-.338
PTPLong1	2.000	10.000	-.422	-1.598	-.485	-.917
PTPLong2	1.000	10.000	-.768	-2.906	.410	.776
PTPLong3	2.000	10.000	-.598	-2.262	-.223	-.422
PTPLong4	2.000	10.000	-.748	-2.830	.328	.620
PTPshort3	1.000	10.000	-1.194	-4.521	1.448	2.740
PTPshort4	1.000	10.000	-1.289	-4.880	2.024	3.832
SN1	1.000	10.000	-1.606	-6.080	2.498	4.728
SN2	1.000	10.000	-.092	-.348	-.945	-1.789
SN3	1.000	10.000	-.432	-1.634	-.641	-1.214

³⁸“MLE is a procedure iteratively improves parameter estimates to minimise a specified fit function.” (Hair et al., 2013).

Variable	Min.	Max.	Skew.	C.R.	Kurtosis	C.R.
SN4	1.000	10.000	-.299	-1.131	-.527	-.998
ATT1	1.000	10.000	-.811	-3.072	.112	.213
ATT2	1.000	10.000	-1.880	-7.117	3.862	7.310
ATT4	2.000	10.000	-.926	-3.507	.230	.435
ATT5	3.000	10.000	-.607	-2.299	-.398	-.754
Multivariate					139.705	19.102

Note: The constructs are *EFFB* (Emergency Fund Formation Behaviour), *INT* (Intention), *PBC* (Perceived Behaviour Control), *PTP* (Propensity to Plan), *SN* (Subjective Norms), and *ATT* (Attitude). The critical ratio (C.R) for skewness is computed by the sample skewness divided by its standard error. The critical ratio (C.R) for kurtosis is computed by the sample kurtosis divided by its standard error. The result above was calculated automatically by AMOS programme.

5.3 Chapter Summary

The CFA results confirmed that there were six main constructs (i.e. Emergency fund formation behaviour, intention, perceived behaviour control, propensity to plan, subjective norms and attitude) and two second order constructs (i.e. propensity to plan short term and long term). Each construct's items were also confirmed. After the CFA procedure, the issues of unidimensionality, validity and reliability were analysed. The findings indicated that all of the constructs achieved the required level.

Additionally, the definition of emergency fund formation behaviour confirmed that it included two main financial behaviours in one concept. These were defined as savings and investment. The normality of the data was evaluated and it was found that it was appropriate to run Structural Equation Modelling (SEM) to test the hypothesis. This will be discussed further in the next chapter.

CHAPTER 6

RESULT 1: THE EMERGENCY FUND FORMATION BEHAVIOUR

6.0 Introduction

This chapter presents the results of the analysis of the emergency fund formation behaviour. The outcomes of the modelling process will be shown and discussed. It will also present the results from the survey interviews on emergency fund formation behaviour in order to triangulate the results from the questionnaire.

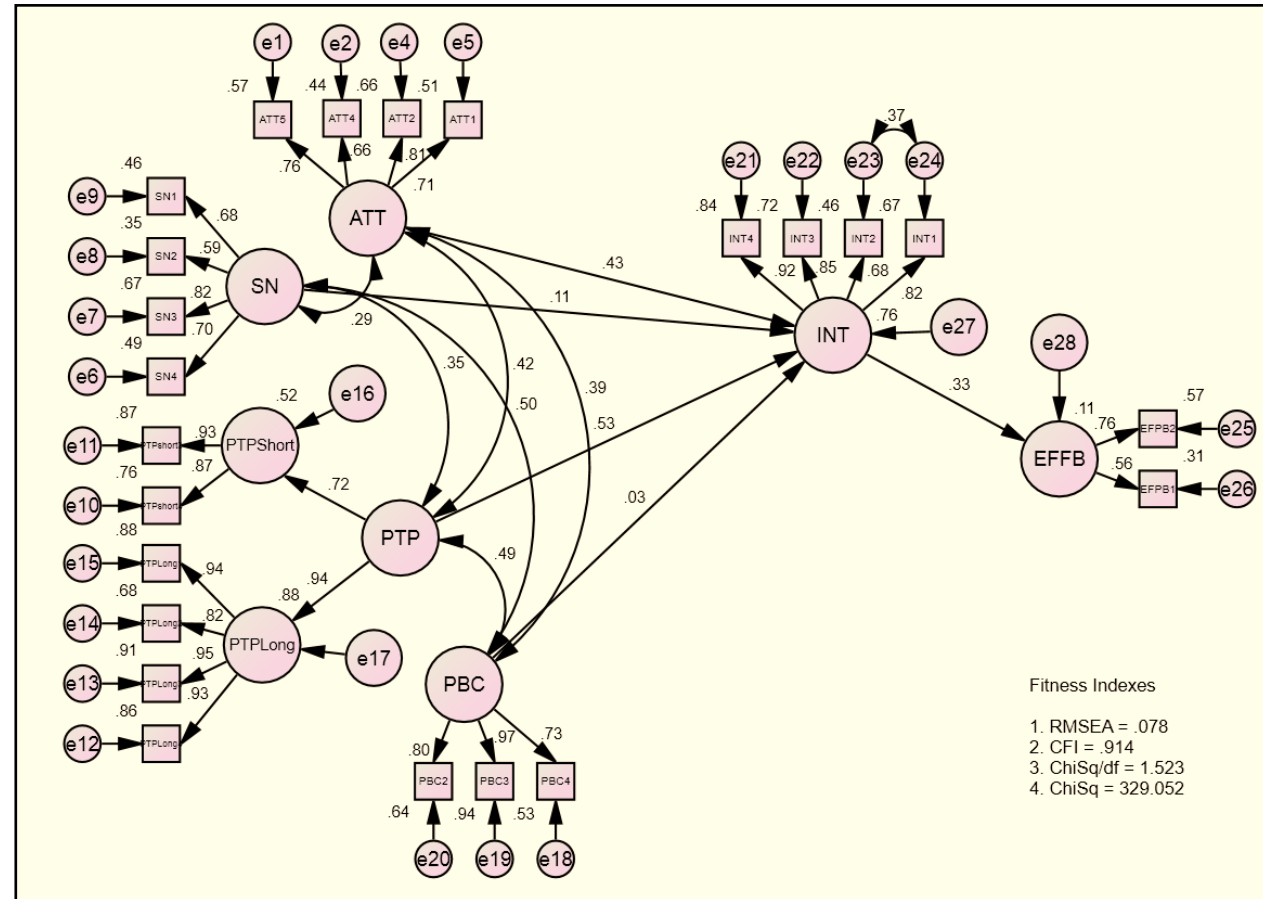
6.1 Structural Equation Modelling (SEM)

It has been argued that a researcher can only test a hypotheses by developing the structural model using SEM to be able to answer the research questions, after all of the validation and satisfactory of fit indexes are achieved (Chapter 5) (Awang, 2012b; Hair et al., 2013). This is basically because this stage is about to test the overall theory, which includes both the measurement relationship of indicators to constructs and the hypothesised structural relationship among constructs (Hair et al., 2013). The fitness criteria of the model used at this stage is the same as that used for the measurement model³⁹: Absolute Fit and Incremental Fit (Hair et al., 2013).

Figure 6.1 shows the Structural Equation Modelling for emergency fund formation behaviour.

³⁹ See Table 4.9 for details of Absolute Fit and Incremental Fit.

Figure 6.1: EFFB Structural Model of All Constructs



Note: The model shows the causal effect between Exogenous constructs [*i.e.* Attitude (*ATT*), Subjective Norms (*SN*), Propensity to Plan (*PTP*), Perceived Behaviour Control (*PBC*)] towards Mediator [*i.e.* intention (*INT*)], and Mediator towards Endogenous constructs [*i.e.* Emergency Fund Formation Behaviour (*EFFB*)]. *ATT* was measured using four items, *SN* was measured using four items, *PTP* has two constructs, namely *PTPShort* and *PTPLong*, which was measured by two and four items individually. *PBC* was measured by three items, *INT* was measured by four items and *EFFB* was measured by two items.

The summary of fitness indexes for the model is presented in Table 6.1 (below). It indicates that this model achieved the required level. The values for indexes are RMSEA = 0.078, CFI = 9.14 and ChiSq/df = 1.523.

Table 6.1: The Fitness Indexes for Measurement Model

Category	Name of Index	Index Value	Comments
Absolute Fit	RMSEA	0.078	Required level is achieved
Incremental Fit	CFI	0.914	Required level is achieved
Parsimonious Fit	Chisq/df	1.523	Required level is achieved

Note: The required level for Fitness Indexes were: RMSEA <0.08; CFI > 0.90; (X^2/df) < 5.0 (see Table 4.9 for details).

In addition, as shown in Figure 6.1, the standardised beta estimates for direct effect of attitude (ATT), subjective norms (SN), propensity to plan (PTP) and perceived behaviour control (PBC) on intention (INT) are 0.43, 0.11, 0.53 and 0.3 respectively. This suggests that propensity to plan had the biggest impact on the intention to allocate an emergency fund. The correlation between ATT, SN, PTP and PBC are below 0.85. Additionally, the value of coefficient of determination R^2 for intention is 0.76. This figure indicates that the contribution of ATT, SN, PTP and PBC constructs in estimating the intention is 76%. Moreover, the value of coefficient of determination R^2 for emergency fund formation behaviour (EFFB) is 0.11. This figure indicates that the contribution of intention construct in estimating the EFFB is 11%.

6.1.1 Hypotheses Testing Results: Causal Effect towards Intention of Emergency Fund Formation Behaviour

In total (see Table 4.1), five (H_1 , H_2 , H_3 , H_4 and H_5) out of ten research hypotheses on the causal effect relationship were examined. Table 6.2 presents the results for all five hypotheses:

Table 6.2: The Results for Hypotheses Testing

	Hypotheses	Standard Error	Critical Ratio	P-Value	Results
H₁	Attitude provides a significant and direct effect on intention towards emergency fund formation behaviour	.132	3.808	***	Supported
H₂	Subjective norms provide a significant and direct effect on intention towards emergency fund formation behaviour	.088	1.082	.279	Not Supported
H₃	Perceived behavioural control provides a significant and direct effect on intention towards emergency fund formation behaviour	.096	.321	.748	Not Supported
H₄	Propensity to plan provides a significant and direct effect on intention towards emergency fund formation behaviour	.151	4.273	***	Supported
H₅	Intention provides a significant and direct effect on emergency fund formation behaviour	.230	2.235	.025	Supported

Note: *** Significant at $p < 0.001$

The results show that three hypotheses were supported. This can be broken down as follows. Attitude and propensity to plan had a direct effect on intention to carry out emergency fund formation behaviour. Intention was also found have a direct effect on emergency fund formation behaviour. However, two hypotheses were rejected because

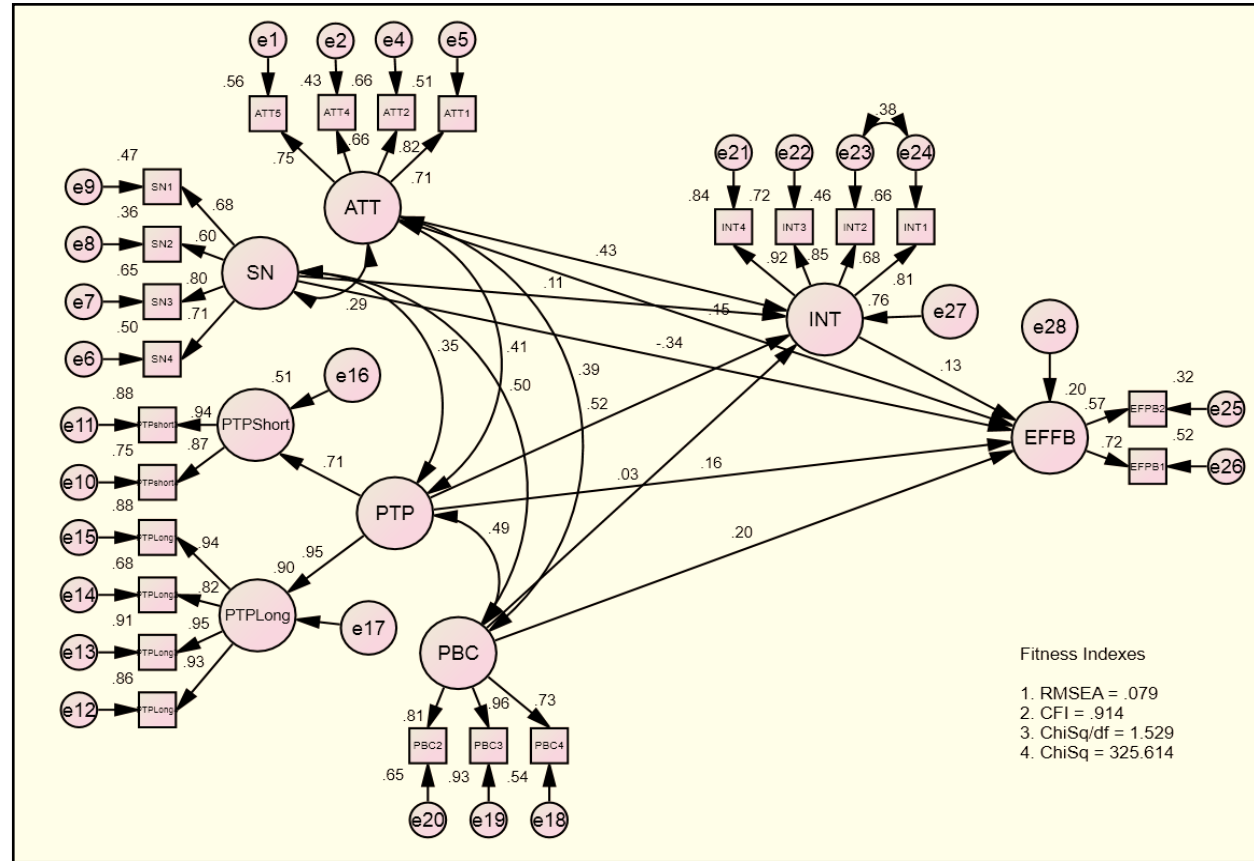
they were found to be insignificant in the hypothesised directions. Further, hypothesis H_6 will be tested in the following sections.

6.1.2 Hypotheses Testing Results: Mediation Effect

Mediating variable is intended to address the effect in the relationship between exogenous and endogenous variables (Awang, 2012b, p.98). Cheung & Lau (2007) argued that testing mediator effect (also known as intervening variables) helps social science researchers to have a greater understanding of the relationship between them.

In previous Table 4.2, it was hypothesised that intention mediates the effects of attitude, subjective norms, propensity to plan and perceived behaviour control towards emergency fund formation behaviour. Figure 6.2 (below) shows the results after the model is executed: Standardized Regression Weights.

Figure 6.2: Executing the EFFB Model to Analyse Intention as a Mediator



Note: The model shows the causal effect between Exogenous constructs [*i.e.* Attitude (*ATT*), Subjective Norms (*SN*), Propensity to Plan (*PTP*), Perceived Behaviour Control (*PBC*)] towards Mediator [*i.e.* intention (*INT*)], and Mediator towards Endogenous constructs [*i.e.* Emergency Fund Formation Behaviour (*EFFB*)]. *ATT* was measured using four items, *SN* was measured using four items, *PTP* has two constructs, namely *PTPShort* and *PTPLong*, which were measured by two and four items individually. *PBC* was measured by three items, *INT* was measured by four items and *EFFB* was measured by two items.

Table 6.3: The Results for Mediation Hypotheses Testing

Construct	Path	Construct	Estimate	Standard Error	Critical Ratio	P-value	Results
INT	<---	ATT	0.505	0.120	4.216	***	Significant
INT	<---	SN	0.103	0.086	1.193	0.233	Not Significant
INT	<---	PTP	0.652	0.155	4.221	***	Significant
INT	<---	PBC	0.26	0.098	0.264	0.792	Not Significant
EFFB	<---	INT	0.145	0.406	0.357	0.721	Not Significant
EFFB	<---	ATT	0.199	0.321	0.618	0.537	Not Significant
EFFB	<---	PTP	0.224	0.384	0.585	0.559	Not Significant
EFFB	<---	SN	-0.349	0.194	-1.801	0.072	Not Significant
EFFB	<---	PBC	0.221	0.205	1.074	0.283	Not Significant

Note: EFFB (Emergency Fund Formation Behaviour), INT (Intention), PBC (Perceived Behaviour Control), PTP (Propensity to Plan), SN (Subjective Norms), ATT (Attitude).

*** Significant at $p < 0.001$

The results (Table 6.3) indicate that no mediation effect occurred. Therefore, the hypothesis (H_{10}) on the mediation effect of intention between attitude, subjective norms, propensity to plan and perceived behaviour control towards emergency fund formation was not supported. It could therefore be concluded that intention was not a mediator in the context of this research.

6.1.3 Hypotheses Testing Results: Causal Effect towards Emergency Fund Formation Behaviour

Figure 6.3 presented the modified EFFB model, in which the intention construct is excluded. This is because intention was found not to mediate the relationship between all variables towards emergency fund behaviour. The exclusion of intention, then, is

undertaken to see the model re-specification against that proposed by the original model. This is known as the model modification comparison procedure.

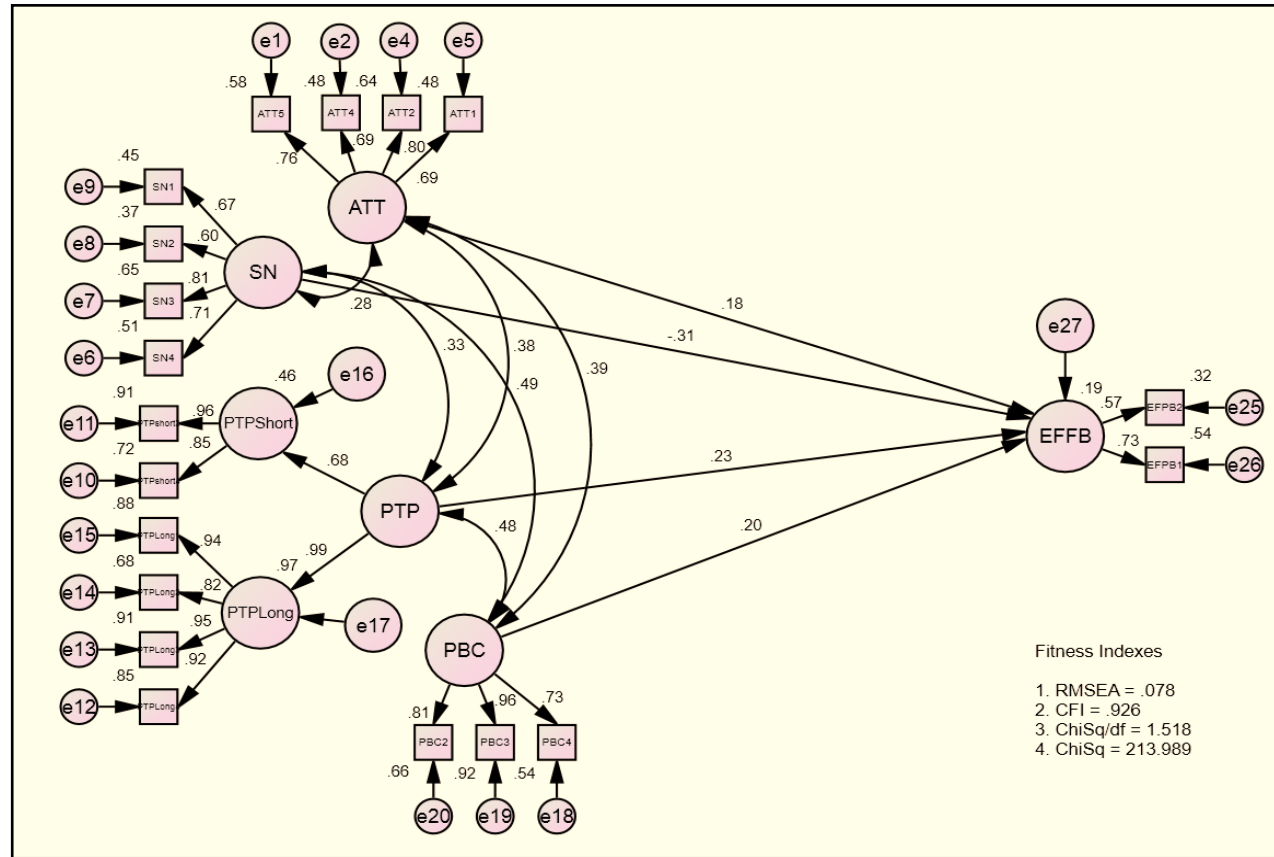
Then, the direct effect of attitude, intention, subjective norms and propensity to plan toward emergency fund formation behaviour was analysed to test the hypothesis for direct effects. In this stage, the remaining hypotheses (H₆, H₇, H₈, and H₉) were tested and the summary is shown in Table 6.4.

Table 6.4: The Results for Hypotheses Testing

	Hypotheses	Standard Error	Critical Ratio	P-value	Results
H₆	Attitude provides a significant and direct effect on emergency fund formation behaviour	0.303	3.077	0.002**	Supported
H₇	Subjective norms provide a significant and direct effect on emergency fund formation behaviour	0.237	-0.915	0.360	Not Supported
H₈	Perceived behavioural control provides a significant and direct effect on emergency fund formation behaviour	0.261	1.100	0.271	Not Supported
H₉	Propensity to plan provides a significant and direct effect on Intention towards emergency fund formation behaviour	0.354	-2.004	0.045**	Supported

Note: ** Significant at $p < 0.005$

Figure 6.3: Modified EFFB Structural Model



Note: The model shows the causal effect between Exogenous constructs [*i.e.* Attitude (*ATT*), Subjective Norms (*SN*), Propensity to Plan (*PTP*), Perceived Behaviour Control (*PBC*)] towards Mediator [*i.e.* intention (*INT*)], and Mediator towards Endogenous constructs [*i.e.* Emergency Fund Formation Behaviour (*EFFB*)]. *ATT* was measured using four items, *SN* was measured using four items, *PTP* has two constructs, namely *PTPShort* and *PTPLong*, which were measured by two and four items individually. *PBC* was measured by three items, *INT* was measured by four items and *EFFB* was measured by two items.

Table 6.4 indicates that there is a significant direct effect of attitude and propensity to plan towards emergency fund formation behaviour. This suggests that attitude and propensity to plan are found to significantly directly contribute to emergency fund formation behaviour.

Comparisons between the initial model and modified model are presented in Table 6.5:

Table 6.5: Comparison of Goodness Index Measures between EFFB Initial Model and Revised Model

GOF Index	Revised Model	Initial Model	Comments
Absolute Fit			
RMSEA	0.078	0.078	Required level is achieved
Incremental Fit			
CFI	0.926	0.914	Required level is achieved
Parsimony Fit			
X^2/df (chi-square/df)	1.518	1.523	Required level is achieved

Note: The required level for Fitness Indexes were: RMSEA <0.08; CFI > 0.90; (X^2/df) < 5.0 (see Table 4.9 for details).

From the comparisons of Figure 6.1 and Figure 6.3 shown above, ΔX^2 shows value more than 3.84. This indicates that the modified model shows a better fit (Hair et al., 2013, p.651). This research also found that the theory fitted the initial model, however, the revised model showed a better GOF fit. By comparing models, it can be seen that the initial model in Figure 6.1 represented an effect of R^2 from exogenous constructs (i.e. ATT, SN, PTP and PBC), and the mediator construct (i.e. INT) towards emergency fund formation behaviour construct is 11%. However, after the direct effect was tested between all exogenous constructs towards emergency fund formation behaviour

constructs, R^2 was seen as representing 19%. These demonstrate that the variables are better at predicting the direct effect towards emergency fund behaviour rather than predicting the intention of emergency fund formation behaviour. It could be argued, then, that although those models achieved the fitness index required, there are still the possibilities that those other factors contribute to emergency fund formation behaviour.

In addition, as these models use the Maximum Likelihood Estimation (MLE)⁴⁰ procedure, it can be argued that this is a valid and stable result (Hair et al., 2013). Hair et al. (2013) further argued that if the normality assumption is achieved, MLE will provide a more efficient and unbiased result. As mentioned in Table 5.22, the data satisfied the normality requirement. Therefore, the results are valid, stable and unbiased. In fact, using MLE proves fairly robust in the event of the normality assumption (Iacobucci, 2010).

Survey interview results are later in this chapter are purposely to investigate the connections between the results and examine the additional findings.

6.2 Results from the Survey Interview

6.2.1 Descriptive Analysis

This section discusses the findings drawn from the survey interviews. This will be done to support the previous findings of the emergency fund formation behaviour models. As noted earlier, the survey interview was carried out by clicking the link provided either

⁴⁰“MLE is a procedure iteratively improves parameter estimates to minimise a specified fit function.” (Hair et al., 2013)

in the survey platform or via the e-mail addresses that were previously given by respondents at the end of questionnaire section.

Chapter 4 explained that this research also used open-ended questions in order to support and gather more understanding on emergency fund provision among young student adults. Therefore, the survey interview was run from April to June 2014. The gatekeepers for the chosen universities were required to share both the questionnaire and survey interview links, thus allowing students to choose between answering one, the other, or both. Additionally, at the end of both the questionnaire and survey interview, the students were also provided with the alternative of leaving their e-mail address so that they could be contacted later.

38 respondents who fulfilled the questionnaire also left their email, agreeing to be contacted to participate in the survey interview. Ultimately, only ten students participated in the survey interview. At the end of each survey interview, participants were asked to provide some personal details that were treated confidentially. Table 6.6 shows the participants' information.

Table 6.6: Participants Details in the Survey Interview

Participant No	Gender	Age Category	Level of Education	Job	Dependency on Financial Aid
P1	Male	22-25	Degree	Student	Independent
P2	Female	18-21	Degree	Student	Dependent
P3	Male	18-21	Degree	Student	Dependent
P4	Male	18-21	Degree	Student	Independent
P5	Male	22-25	Degree	Student	Dependent
P6	Male	26-30	Degree	Part-time student/full-time worker	Independent
P7	Male	18-21	Degree	Student	Dependent
P8	Female	18-21	Degree	Student	Dependent

P9	Female	18-21	Diploma/ certificate	Student	Independent
P10	Female	26-30	Postgraduate	Part-time student/full- time worker	Dependent

Note: Dependent means that the participant's monthly expenses are sponsored by their family/friends or both).

The above illustrates that the participants were almost equally balanced in terms of gender: 40% were female and 60% were male. Most of participants (80%) were studying at degree level and were between 18 and 21 years old. The fact that this research only counted those that had an emergency fund shows that individuals who were either dependent or independent of financial aid were able to perform an emergency fund.

6.2.2 Emergency Expenses: Perspective of Young Student Adults

The questionnaire for this research defined emergency events in accordance with the extant literature. This defines an emergency event as sudden unemployment, payments of medical bills or a shortage of money or income to cover other unexpected events.⁴¹ However, this definition can be seen as failing to demonstrate an emergency situation that pertains to young student adults. Therefore, it is interesting to first explore the emergency situations from the young student adult's perspective; that may place the situations at a different priority to other age groups.

From the survey, interviewed participants were asked two separate questions on the theme of defining an emergency situation. The questions and answers were presented in Appendix 9, Table 1.

⁴¹ See Chapter 2 on the concept of emergency fund.

The following two open-ended questions were asked to participants: Q1. What events do you think may require you to access some quick cash? Q2. What do you understand by preparing for emergency expenses? As this indicates, there are various factors that define an emergency situation from the perspective of a young student adult. What proves interesting is that emergency events in this context can also include charity and leisure expenses, as mentioned by P5, P8 and P9:

P5: (Q1) *“Reunion or gathering”*

P8: (Q1) *“1.charity events 2.university events such as clubs and society”*

P9: (Q1) *“canteen day, food bazaar, fair, ...”*

The finding on leisure expenses is consistent with Heckman, Lim & Montalto (2014), who argued that one of the biggest financial stresses among students is when they do not have enough money to participate in the same activities as their peers. Equally, based on the responses of P2, P4, P8 and P10, there is a need to prepare some money in order to help others who need money or who might need to borrow from them.

P2: (Q1) *“1. Charity programmes 2. Tournaments, (Q2) it is where we need cash during emergency, such as for medical or help someone who is needy”*

P4: (Q2) *“to save others life, make someone smile at their face”*

P8: (Q1) *“1.charity events 2.university events such as clubs and society”*

The results also found that most participants (six out of ten) stated that the reason they had emergency funds was to help them cover their medical expenses. For instance, P3 and P6 stated:

P3: (Q2) *“to cover our expenses for medical”*

P6: (Q2) *“In my case, emergency expenses mean medical Especially for my wife to deliver baby”*

This finding is unsurprising given that better health services are provided by the private sector, in which the cost of the service usually outstrips that of the public sector (Manaf, 2012). This is because public healthcare service in Malaysia is still chargeable. For example, for Malaysian citizens, a sum of RM30.00 (£5) is charged for medical or surgical cases (gynaecology) and a sum of RM15.00 (£3) is charged per treatment (Ministry of Health, Malaysia, 2013). This amount may increase according to the treatments. Not all individuals are able to get exemption on the service charged. This indicates that individuals are still required to pay an amount in order to access public health service⁴². On a related note, issues such as shortage of staff in charge and overcrowded wards mean that there tends to be a long waiting list for public health (Manaf, 2012). This prompts access to private healthcare and also the provision of emergency fund.

Although individuals may choose private health services, they are more financially prepared. This is related to the new amount of medical charges from private healthcare. The increase of medical bills in the private healthcare is found in Section 106(2) of the Private Healthcare Facilities and Services Act. This Act also grants the Health Minister the power to amend prices (Malaysia Government, 2013). The price hike has been raised being between 14% and 18% (Manaf, 2012), placing further emphasis on the need for emergency fund.

⁴² In addition, those who can only afford low fees in the public healthcare service need to accept the waiting length, which is more than 30 minutes for an outpatient service (Manaf & Nooi, 2009 Haron; Hamida & Talib, 2012). However, Hassali et al. (2014) argued that some individuals need to wait up to two hours and more to get the service in public healthcare, which causes less satisfaction at the service provided.

6.2.3 Factors Contributing to Emergency Fund Formation Behaviour

Participants were asked about their perspective on emergency fund formation behaviour. The participants were asked the question: what do you think are the advantages of preparing for future emergency needs? Details of the answers are presented in Appendix 9, Table 2.

Most participants indicated that among the main benefits of possessing an emergency fund is that it reduces stress and helps them to avoid future problems:

P5: *“We will have enough money when needed and will not cause trouble to others”*

P6: *“Advantages will help you to not stress during that critical event. And it will help you and your family. It is part of your financial security. need savings and asset.”*

A small number of participants suggest that having an emergency fund would contribute to a better and healthier life. Thus, it could be concluded that preparing for an emergency helps to avoid and reduce the risks associated with pressure during an emergency event. The findings support the questions used in the questionnaire on items in attitude construct, which mainly agreed to contribute to more happiness and less stress.

Next, participants were asked about the potential reasons contributing to the success in preparing an emergency fund. The question is: How are you able to prepare your emergency financial needs? The detailed answers were presented in Table 3, Appendix 9. The results show that most participants agree that planning and managing their money wisely helps them to allocate their emergency fund. Only one participant (P4) has suggested that help from family and friends makes him able to have an emergency

fund; other reasons, including self-motivation (P8) and the understanding of priority (P9), make them able to have an emergency fund.

Next, participants were asked about the implications of government policies on their emergency fund formation behaviours. Table 4 in Appendix 9 summarised the findings. The previous section (1.3) reveals two newly implemented Malaysian Acts: regulation on minimum wages and maximum age of retirement (60 years old). The above results indicate that one person (P2) stated that the government's policies negatively affected her preparation of an emergency fund. In addition, (P10) noted that the regulation on minimum wages positively affected her, while the other one policy shows a negative effect. Over half of participants stated that they did not think these policies affected their own emergency fund formation behaviour.

All in all, findings from survey interview analysis suggested that the main reason to have an emergency fund was to have a less stressful and happier life. This was reflected in the agreement of the attitude items in the previous questionnaire. The ability to allocate an emergency fund depended mainly on planning and managing resources or money. Very little evidence indicates that the effect of other factors, such as family, friends, income or government policies, contributed to the success of emergency fund formation behaviour among young student adults.

6.3 Key Findings

6.3.1 Attitude towards Emergency Fund Formation Intention and Formation Behaviour

The measurement scale for attitude was confirmed after the CFA procedure,⁴³ which consisted of four items of measurement (see questionnaire, section 3: Q1 for details). The questions asked respondents about their perspectives of the benefits of having an emergency fund. The causal direct effect was found to significantly contribute towards young student adults' emergency fund motive building and action (see Figures 6.1 and 6.3). In relation to this, the responses from participants in the survey interview presented similar perspectives on emergency fund, with regard to the fact that possessing one could reduce stress, as well as meaning that they would not be dependent on others in case of emergency.

The results of this research provided new findings in this regard. Previous studies have discussed the effect of attitude towards a general motive for saving, rather than its effect on emergency fund formation as a whole, and this was lacking in the literature (Gjertson, 2015). It was found that attitude has a directly significant contribution towards motives for general saving (Garcia et al., 2011; Soyeon Shim et al., 2012). However, Lim (2011) argues that attitude did not significantly contribute to general savings motives among Malaysian savers.

These findings also have important implications for developing on the additional current literature of emergency fund formation behaviour because previous studies have

⁴³ See Figure 5.7.

not treated attitude as a direct measure towards intention or emergency fund formation behaviour. For instance, previous studies, such as those carried out by Bi & Montalto (2004), have argued that attitude towards borrowing does not significant contribute to an individual's preparation for emergency financial need. Attitude towards borrowing, however, contributes to less savings behaviour (Anong & Fisher, 2013).

In conclusion, this seems to indicate that young student adults who understand the importance of an emergency fund generate desire to allocate the fund and also directly become a reason to successful allocate it. As the attitude was also previously found to contribute to confidentiality among young adults to perform savings behaviour (Loke, Choi & Libby, 2015), equally, financial attitude also contributes to healthy financial behaviours (Shim, Barber, Card, Xiao & Serido, 2010).

6.3.2 Propensity to Plan towards Emergency Fund Formation Intention and Formation Behaviour

The addition of propensity to plan as a factor in the theoretical framework of this research further supports the hypothesis that propensity to plan significantly contributes to emergency fund motive and allocation behaviour. Propensity to plan was found to increase an individual's wealth (Ameriks, Caplin & Leahy, 2002) and to make young adults able diversify their portfolio (Fessler, Schürz, Wagner & Weber, 2007).

The significant contribution of propensity to plan towards intention and emergency fund formation behaviour found from the EFFB models (both initial and modified): confirmed that young student adults had carried out both investments and savings for emergency purposes. This could therefore suggest that planning ahead for emergency fund allocation was the reason that young student adults in this research were successful

in allocating their emergency fund, as can be seen in the survey interview results. Besides, planning in this context could be argued to relate to the discipline and understanding of own priority, which contributed to having an emergency fund.

6.3.3 Subjective Norms and Perceived Behaviour Control towards Emergency Fund Formation Intention and Formation Behaviour

From both EFFB models previously, no significant effects between subjective norms and perceived behaviour control were found towards intention to allocate or towards allocation behaviour. The results from questionnaire were supported by the survey interview.

It has been argued that young student adults are usually influenced by their families, particularly their parents, when it comes to making financial decisions. Sometimes those decisions were made to satisfy their parents' requirements or expectations (Shim et al., 2009). Others have argued that families influence decisions, such as saving for retirement (Van Schie, Donkers & Dellaert, 2012). It has also been indicated in previous studies on general savings behaviour (i.e. Friedline, Elliott & Nam, 2011; Webley & Nyhus, 2013) that young adults are positively influenced by their parents. However, this does not appear to be the case based on the findings of this research. This research has found that the decision to prepare an emergency fund among young student adults were not the social agents. The independent nature of the emergency fund formation decision made by the young student adults in this research context could answer the questions arising from the dependency on their parents that young adults have displayed, noted by Beverly (2013), and how that impacts on their passive and active savings and investments behaviour.

Equally important, relating to perceived behaviour control effect towards intention and emergency fund behaviour, from reviewing the literature no data was found on the association. As noted before, perceived behaviour control in this research was previously defined to include two government policies, self-desire and income factors that would probably drive individuals to prepare their emergency fund.⁴⁴ Then, perceived behaviour control was found in this research not to significantly influence the reasons why young student adults in this research want to perform their emergency fund behaviour. In other views, Soyeon Shim et al. (2012) have argued that there is a significant effect between perceived behaviour control towards savings behaviour and behaviour intention.

Previous studies, however, did mention some factors, such as income and the relationship towards emergency fund holding. Therefore, some evidence can be found in previous studies to suggest that there is no significant effect of income towards the adequacy level of emergency fund holding (Chang & Huston, 1995; Bhargava & Lown, 2006). Others (i.e., Chang et al., 1997; Anong & DeVaney, 2010) found it is significant. However, again, such expositions are unsatisfactory because they did not directly test the effect of perceived behaviour control construct, as defined by this research, towards emergency fund formation behaviour.

In relation to this, others studies were also found to indicate the significant effect of income, for example towards general savings motives (Garcia et al., 2011) and general investments (Rahim et al., 2012). The effect of two government policies that were tested in this research could be argued to contribute to new findings in the literature.

⁴⁴ See Section 4.4.3.1

6.3.4 Intention towards Emergency Fund Formation Behaviour

This research has found that young student adult's intentions were found to significantly contribute to the allocation of their emergency fund. This was shown in the modelling and survey interview results. A previous study by Fisher & Anong (2012) found that the goal of saving increased the discipline of savings behaviour, especially in motives for saving for an emergency. This was found to be in line with a study by Nyhus & Webley (2001), in which savings were found to be associated with self – control, and when the ability to save is lower, the willingness to save is more important.

However, this research context indicates that the intention to allocate an emergency fund was not a mediator between attitude, propensity to plan, subjective norms and perceived behaviour control among young student adults to emergency fund allocation behaviour.

6.4 Chapter Summary

This chapter revealed the emergency definition among young student adults in this research context. It discussed emergency expenses as medical expenses, leisure expenses and charity, which could be argued expended previous literature explanation. Furthermore, it suggested that there is a direct relationship between attitude and the propensity to plan towards intention and emergency fund formation behaviour. This indicates that the intention and ability to form emergency fund behaviour comes from an individual's attitude and their planning of their money on a short-term (daily) and long-term (monthly) basis. The findings from the survey interviews produce similar conclusions.

The subjective norms factor, which refers to the social pressure, was found to not affect young student adults' preparation of their emergency fund. It was also found that the individual's ability factor, which refers to their income, and government policies did not directly contribute towards young student adult's intentions and emergency fund formation behaviour.

Notwithstanding the issue of intention is not fully examined in this thesis, for a sample of young student adults who already have an emergency fund, there is an evidence to suggest that their intention leads to emergency fund formation behaviour. However, as measured in the current sample, intention does not appear to mediate the relationship between attitudes, subjective norms, propensity to plan and perceived behavioural control towards emergency fund formation behaviour.

Again, only two main financial behaviours were drawn from the CFA that mainly referred to emergency fund formation behaviour, namely savings and investments for emergency propose. This is shown in the measurement model (Figure 5.7) and also SEM models.

As a conclusion, the Emergency Fund Formation Behaviour (EFFB) model gives a better prediction of emergency fund formation behaviour directly, rather than predicting the intention of emergency fund behaviour. This is shown by the ΔX^2 value and the R^2 value after the comparison.

CHAPTER 7

RESULT 2: THE PREPARATION OF EMERGENCY FUND AMONG YOUNG STUDENT ADULTS

7.0 Introduction

The previous chapter focused on the behavioural factors that contribute to emergency fund formation behaviour. The main purpose of this chapter is to answer the third research question: How do young student adults prepare for emergency fund or for future emergencies? It will discuss two main findings: 1) the method of emergency fund formation behaviour among young student adults and 2) the adequacy of emergency fund holdings among young student adults. The conclusions on these themes are drawn from the survey questionnaire results with open-ended survey interview results.

7.1 The Preparation of Emergency Fund among Young Student Adults

7.1.1 The Method of Emergency Fund Formation Behaviour among Young Student Adults

In Chapters 5 and 6, the formation of emergency fund was confirmed to have involved two main financial activities, namely saving and investment behaviour.⁴⁵ Table 7.1 presents the frequencies of both financial behaviours among young student adults in this research.

⁴⁵ See Figure 5.8 in Chapter 5 for the details. In the figure, EFFB (Emergency fund formation behaviour) constructs indicate that there are two items represented the construct, namely savings and investments. This was confirmed again in the Emergency Formation Fund Models in Chapter 6. However, the results need to be explained with caution, as the item representing borrowing behaviour was eliminated from the EFA stage and not tested after that.

Table 7.1: Crosstabulation Frequencies between Savings and Investments Behaviour among Young Student Adults

Frequencies			Investment							Total
			Not at all	Every month	Every 3 months	Every 4 months	Every 5 months	Every 6 months	No specific time	
Savings	Not at all	Count	0	0	1	0	0	0	0	1
		% of Total	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	1.2%
	Every month	Count	11	9	1	0	0	0	13	34
		% of Total	12.8%	10.5%	1.2%	0.0%	0.0%	0.0%	15.1%	39.5%
	Every 2 months	Count	0	0	1	1	0	0	1	3
		% of Total	0.0%	0.0%	1.2%	1.2%	0.0%	0.0%	1.2%	3.5%
	Every 3 months	Count	0	0	5	0	0	1	1	7
		% of Total	0.0%	0.0%	5.8%	0.0%	0.0%	1.2%	1.2%	8.1%
	Every 4 months	Count	1	0	0	1	0	0	0	2
		% of Total	1.2%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	2.3%
	Every 5 months	Count	1	0	0	0	0	0	0	1
		% of Total	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%
	Every 6 months	Count	1	0	0	0	1	0	0	2
		% of Total	1.2%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	2.3%
	No specific time	Count	15	1	0	0	0	0	20	36
		% of Total	17.4%	1.2%	0.0%	0.0%	0.0%	0.0%	23.3%	41.9%
Total		Count	29	10	8	2	1	1	35	86
		% of Total	33.7%	11.6%	9.3%	2.3%	1.2%	1.2%	40.7%	100.0%

17.4% did not perform investment behaviour at all, nor had they allocated a specific time to save for emergency. 10.5% confirmed that they allocated both savings and investments for emergency purposes every month. In addition, 23.3% of young student adults were found not to have allocated any specific time to save and invest for emergency purposes, suggesting a slightly *ad hoc* approach to emergency fund allocation behaviour. The results also indicate that young student adults prefer to save rather than invest for their emergency fund allocation.

The survey interview results revealed similar findings on saving and investing for emergency fund formation behaviour. The summary of findings is shown in Table 5, Appendix 9.

The results indicated that two out of ten participants (P4 and P7) allocated investments for emergency purposes. The others mentioned that they had prepared some savings for future emergencies. Four participants (P3, P5, P9 and P10) confirmed that they had committed to allocating a certain amount of money for emergency savings every month. P9 reported that she also practiced an informal way to save money by hiding it in various places to prevent her from using it at any time other than in an emergency.

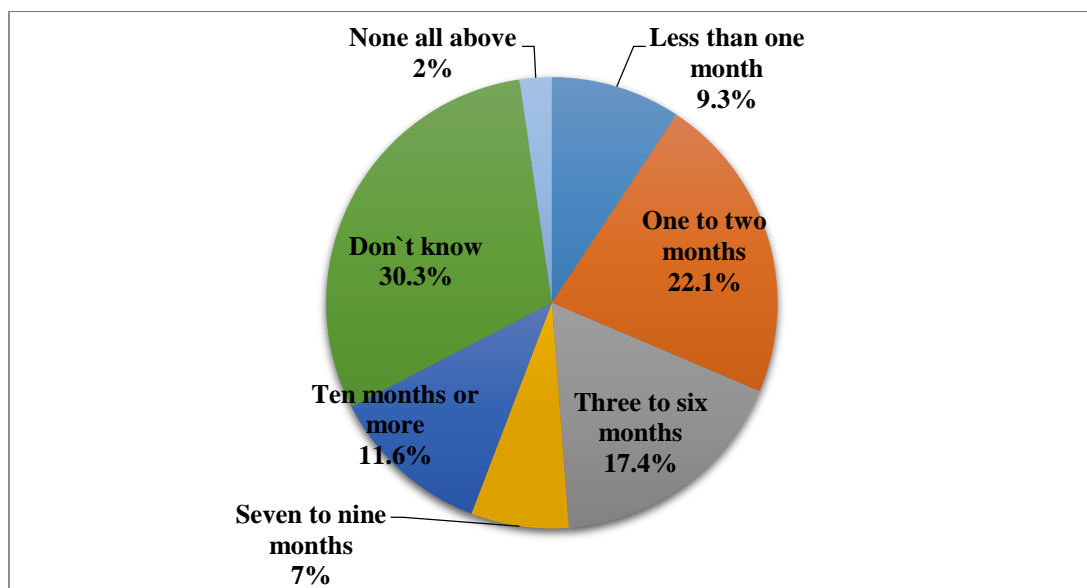
The results from these findings indicate that most young student adults tend to save and make investments on an *ad hoc* basis. Previous studies argued that those who have regular savings habits are less likely to have motives for emergency fund saving (Cho, Fang & Hanna, 2007). In other findings, the emergency saving motive was found to contribute to regularly savings behaviour (Fisher & Montalto, 2010). Unfortunately, in this research, it has not been able to confirm whether the young student adults do save

regularly because they were in a higher income condition, since previously found by Lunt & Livingstone, (1991) that contributed to this factor.

7.1.2 Adequacy of Emergency Fund Allocation among Young Student Adults

One of the issues that were widely investigated by previous studies was that of the adequacy level of emergency fund holding. In this research, respondents were asked to answer the questions that measure the adequacy of emergency fund holdings. The question is: “Thinking about the total amount of money or other financial instruments that you have saved or invested currently for emergency expenses, about how many months of living expenses would this amount cover?”

Figure 7.1: Total Amount Emergency Fund Cover



This question is a modified version of the question that was used by the Survey of Consumer Finances in 2007. The pie chart shown in Figure 7.1 indicates that 30.3% of young student adults have no idea exactly how many months of their expenses would be

covered by their current emergency fund. As defined in this research, the adequacy level of emergency fund is when individuals believe that the fund could cover at least three months of total monthly expenses which is consistent with the definition supplied by Greninger et al. (1996). The results indicate that 31.4% of young student adults do not possess an adequate emergency fund holding. On the other hand, 36% of young student adults have an emergency fund that would cover at least three months of their expenses, fulfilling the minimum level of adequacy.

The results from the survey interview were used to support the questionnaire results. The same question from the questionnaire was used in the survey interview process and the same level of adequacy was inferred. A summary of responses from the participants is shown in Appendix 9, Table 6

The results show that six of the participants (P1, P2, P3, P5, P6 and P9) did not know whether or not the emergency fund that they had allocated would help them survive, or for how many months, based on their total expenses. Just two participants were able to confirm that their fund could help them to cover at least three months and above of their expenses. This indicates that both participants (P4 and P10) had achieved the adequate level of emergency fund holding defined by this research. In comparison, there were also two participants (P7 and P8) who held funds that could probably cover their total expenses for less than two months.

Data from the survey interview can be compared to the data in Figure 7.1. Both suggest that not all young student adults in this research were able to achieve the adequate level of emergency fund holding. However, it is important to bear in mind that the adequacy level measurement of the previous study was found to be inconsistent. Therefore, the

result needs to be discussed with caution. Additionally, the undefined level of adequacy shown by participants might be related to the pattern of inconsistency regarding their monthly expenses: if a person does not know what they spend each month, then it is unlikely that they will know how much they need to save to survive each month. As has previously been shown, young student adults whose expenses were less than or equal to their income tend not bother about the adequacy of their emergency fund, as they think they are at low risk of struggling during emergency needs (Bhargava & Lown, 2006; Rodriguez-Flores & DeVaney, 2007).

This research indicates that most young student adults still do not achieve the recommended adequacy level (i.e. 36% of respondents and two of the participants that achieve the recommended three months adequacy level). In relation to this, a previous study found that half of the Asian-Americans in their study were able to allocate an emergency fund equal to a month of expenditure only, and still show inadequacy, although this group was more prepared for emergency than other ethnic groups (Hong & Kao, 1997). Back to this research context, the samples were Asian people, therefore it could be suggested that Asian people are more likely to have an emergency fund but still fewer individuals could achieve the adequate levels of emergency fund holding.

7.1.2.1 The Adequacy of Emergency Fund Holding among Young Student Adults and Previous Emergency Experience

This research has also indicated that there is relationship between previous experiences of emergency and the adequacy of emergency fund holding. Previous experiences have tended to encourage young student adults to allocate emergency fund. For instance, it was also found by Babiarz & Robb (2014) that those who had not have income shock

experience are more likely to save for emergency. Nevertheless, Scheresberg (2013) found that young student adults who had experienced financial shock before were less prepared for an emergency fund rather than for a retirement fund.

Table 7.2: Crosstabulation Table for Previous Experience and Adequacy Level

Results			Adequacy		
			Adequate	Not adequate	Total
Had previous experience emergency	Yes	Count	19	23	42
		% of Total	32.8%	39.7%	72.4%
	No	Count	12	4	16
		% of Total	20.7%	6.9%	27.6%
Total		Count	31	27	58
		% of Total	53.4%	46.6%	100.0%

$$[X^2 = 4.125 ; df = 2 ; P > 0.42]$$

Chi-square was used to examine the relationship between previous experience of an emergency and adequacy level of emergency fund holdings among young student adults. A significant difference was found. This means that there are differences between those who have previous experience of emergency situations and those who haven't when it comes to preparing an adequate emergency fund. It could be seen that those who have previous experience of emergency situations are more prepared for emergency fund, however still many of them are currently unable to hold an adequate emergency fund. In addition, those who did not have any emergency experience previously were much less prepared for emergency fund.

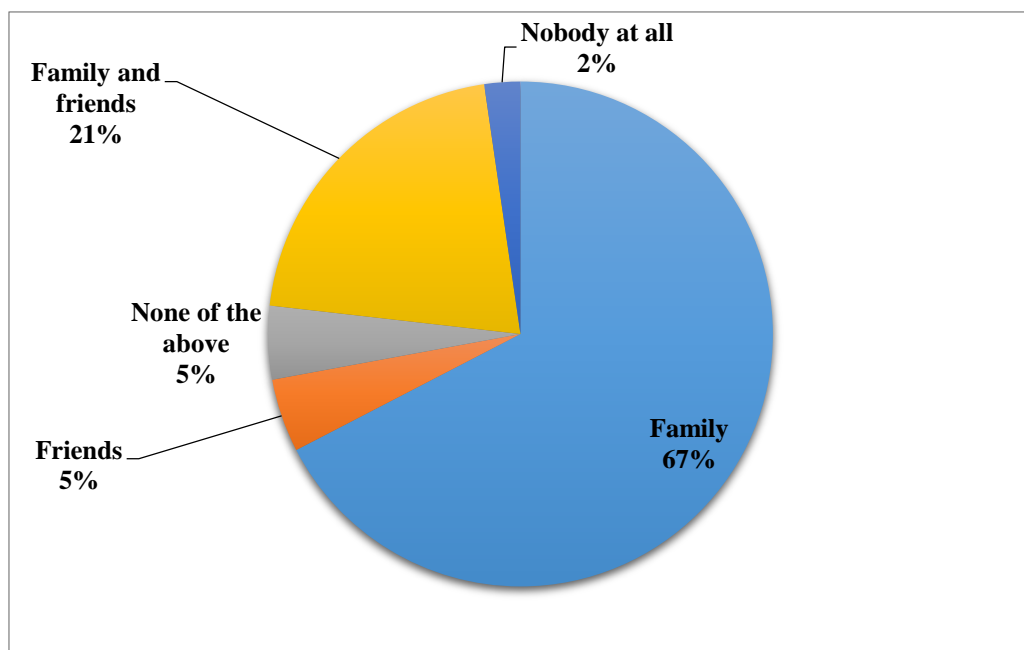
Little evidence of whether there are differences between current emergency fund holding and the previous expenses shock experience could be found in the survey interview (See Appendix 9, Table 7). Only a limited number of participants indicated that they did not have any previous emergency need experience (P1 and P3) and still do not know how much that their emergency fund could cover their total expenses. The two participants that ultimately achieved the prescribed adequacy level of their emergency fund had previous experience of expenses shock (P4 and P10). In contrast, two participants (P7 and P8) had previous experience of an emergency but did not achieve the adequacy of emergency fund holding. Equally, four out of eight participants (P2, P5, P6 and P9) that had previous emergency experience had no idea how much their emergency fund holding could help to cover their future emergency expenses.

The data also indicates that young student adults tend to seek help from others in order to survive during previous emergency situations. Half of the participants (P4, P5, P6, P9 and P10) indicated that they do borrow to help them survive during an emergency. P6 chose to use a credit card and then covered the repayment from future salary. P10 indicated that she borrowed from family members in order to survive during emergencies, and later suggested that she would consider savings and insurance (with a savings scheme) in anticipation of future emergencies.

In relation to this, young student adults in this research will seek to borrow from their family and friends if emergencies or income shortages occur. However, this research ignored potential borrowing from formal lenders, such as credit card or term loans, therefore, these results could not confirmed if those agents potentially became preferment sources of borrowing by young student adults. Although the results in

Figure 7.1 indicated that some of young student adults had adequacy of emergency fund holding, respondents in the survey indicated that they still planned to borrow if there was a shortage in emergency expenses in future. This was consistent with the results of the survey question: “Which individuals might you plan to borrow from if there was an emergency in the future?” The results are summarised in Figure 7.2.

Figure 7.2: Plan to Borrow from Social Agents



This indicates that only 2% of respondents believed that they would not borrow from anyone to cover their emergency expenses. Nevertheless, 67% planned to borrow from family members, 5% planned to borrow from friends and 21% planned to borrow from both social agents: friends and family. However, as this research ignored other potential credit lenders, such as formal channels, it could not thus be argued that social agents are primary sources from which most young student adults plan to borrow from, rather than formal lending facilities such as credit card or term loans. There is a lack of studies focusing on this issue, with only Worthington (2004) standing out. The study found that

respondents seek for loans on credit cards, loans from family and friends and loans from deposit-taking institutions as sources to cover their emergency needs.

In conclusion, the findings show that young student adults were successful in performing an emergency fund, but less of them have adequate emergency fund holdings. This could be perceived to agree with the findings from a previous study that probably less of the young meet the suggested adequacy level of emergency fund in comparison to other age groups (Chang & Huston, 1995). However, when it comes to the Asian background, it could be suggested the findings could relate to the study that found that those from Asian backgrounds were more likely to prepare for an emergency fund, although inadequate (Hong & Kao, 1997). In addition, this research also found that most young student adults planned to borrow if they were unable to survive during emergency situations. Finally, then, when both sets of results are compared, there are clear findings that there is relationship between previous experience of an emergency and adequacy of emergency fund holdings.

7.1.2.2 Financial Aid Status and Adequacy of Emergency Fund among Young Student Adults

It was found in the literature that those who depended on financial aid tended to have more savings than those who were independent. Therefore, this research looked for the potential relationship between financial aid status and the adequacy level of emergency fund holdings among young student adults.

Table 7.3: Crosstabulation Table for Financial Aid and Adequacy Level

Results			Adequacy		
			Adequate	Not adequate	Total
Financial aid dependency	Dependent	Count	22	15	37
		% of Total	37.9%	25.9%	63.8%
	Independent	Count	9	12	21
		% of Total	15.5%	20.7%	36.2%
Total		Count	31	27	58
		% of Total	53.4%	46.6%	100.0%

$$[X^2 = 1.484; df = 2 ; P > 0.223]$$

Chi-square was used to examine the difference between financial aid status and adequacy level of emergency fund holding among young student adults. No significant difference was found.

The results drawn from the survey interview can be seen in the following Table 7.4.

Table 7.4: The Survey Interview Results on the Financial Aid and Adequacy Level of Emergency Fund Holding among Young Student Adults

Participant	Dependency on Financial Aid	Adequacy Level for Current Emergency Fund Holding
P1	Independent	Undefined
P2	Dependent	Undefined
P3	Dependent	Undefined
P4	Independent	Adequate
P5	Dependent	Undefined
P6	Independent	Undefined
P7	Dependent	Not Adequate
P8	Dependent	Not Adequate
P9	Independent	Undefined
P10	Dependent	Adequate

A variety of perspectives are expressed in the table above. Out of ten, two participants (P7 and P8) who were holding an inadequacy of emergency fund were dependent on financial aid. In another point, P10 and P4 were holding an adequacy of emergency fund, but only P10 was dependent on financial aid. There were equal numbers between those whose adequacy levels were undefined between participants, those who were not dependent on financial aid (P1, P6 and P9) and those who were (P2, P3 and P5). This variety show a consistency of findings with the previous chi-square test results outlined in Table 7.3, in which was no difference of adequacy level between both groups. This means that the results contradict to the previous findings of Friedline, Elliott & Chowa, (2013), which argued that young adults who received financial aid were less likely to have savings.

7.2 Chapter Summary

This chapter found that less young student adults in this research achieve the recommended three months adequacy level of emergency fund holding. In addition, previous experiences of emergencies were the main reason as to why young student adults might prepare for an emergency fund.

Furthermore, although some young student adults had an emergency fund and some of those reach the adequacy level recommended, the majority were found still planning to borrow if they think they cannot survive in future emergencies. This indicates that young student adults would borrow if there were shortages in future. From their experiences, family and friends are the social agents that they would turn to in order to survive.

Finally, it was found that the level of adequacy of emergency fund holding was not dependent on financial aid. This means that those that received financial aid from their family and friends did not necessarily have an adequate emergency fund compared to those that did not.

CHAPTER 8

RESULT 3: FINANCIAL SOURCES AND INSTRUMENTS FOR EMERGENCY FUND FORMATION

8.0 Introduction

This chapter will assess the fourth research question: What are the preferred sources of emergency fund among young student adults? It discusses three main themes: the source of income that young student adults use to allocate their emergency fund; the financial instruments that they choose to include in their emergency fund; and the categories of emergency fund holdings among young student adults.

8.1 Sources of Finance among Young Student Adults

In this research, respondents to the questionnaire were asked to indicate the sources of finance they used to provide an emergency fund. From the results, 48% of respondents indicated that they had allocated some portion of their money from a student loan (PTPTN) as their emergency fund.⁴⁶ It also showed that the same number, 21% of the participants, indicated that they had used their scholarship and income respectively for their emergency fund.

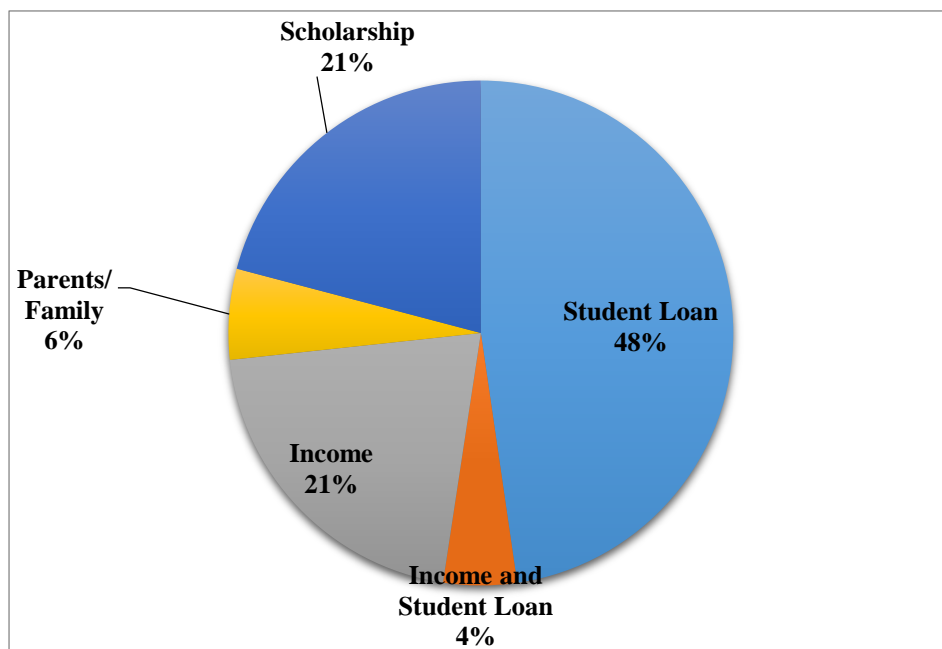
Only 6% of respondents suggested that they had used the financial aid they had received from family or parents to provide their emergency fund. These findings link to the previous conclusions that were drawn from Emergency Fund Formation Behaviour

⁴⁶ The borrowing item was removed from the emergency fund formation behaviour construct; this further limits the explanation of the significant effect of the borrowing behaviour related to the emergency fund formation behaviour.

model analysis.⁴⁷ This found that social agents did not affect the successful formation of emergency fund by young student adults. Similarly, it was shown that there was no difference between those who get the financial aid and those who did not when it came to the adequacy of their emergency fund holding.⁴⁸ In other words, although they may receive financial aid that contributes to their monthly expenses, very few use this to allocate an emergency fund.

Thus, the evidence from this questionnaire finding indicates that the reason contributed to the successful of emergency fund formation behaviour among young student adults not dependent on their family or parents. This result has not previously been described in previous studies. However, it could be found to contradict the study by Serido, Shim, Mishra & Tang, (2010), which found that young adult's financial decisions were driven by their parents expectations, although there were starting college.

Figure 8.1: Financial Sources of Emergency Fund Formation among Young Student Adults



⁴⁷ See subjective norms finding in Chapter 6.

⁴⁸ See Chapter 7.

Next, similar questions to those in the questionnaire were asked in the survey interview. The results can be seen in Table 8, Appendix 9.

Based on the results, it can be concluded that participants were found to have used their student loan, scholarship and their salaries when allocating their emergency fund. Only P5 stated that he used both income from family and his scholarship as financial sources to allocate an emergency fund.

This research reveals that the type of income sources used among young student adults to allocate emergency fund varied. Building on the results of the questionnaire and survey interview, this research suggests that there are six categories of financial sources used by young student adults to form their emergency fund: student loan, scholarship, salary, income from family, salary and student loan, and income from family with scholarship. It can thus be suggested that student loans are very important sources for young student adults when it comes to allocating their emergency fund. In reviewing the literature, no data was found on the details of the income sources that individuals used to allocate their emergency fund, especially among young student adults. This could be an important starting point for forthcoming research in this area.

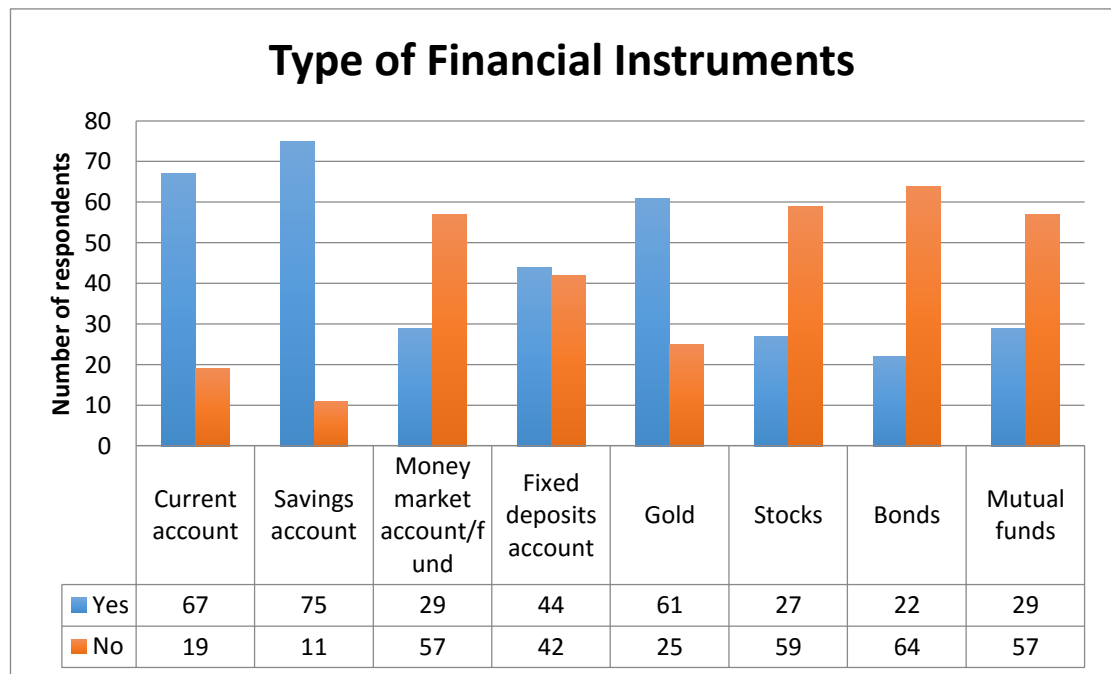
8.2 Financial Instruments for Emergency Fund

Prior studies tended to focus more on the category of emergency fund holding rather than the details of financial instruments used in emergency fund. However, this research argued that the Malaysian context it examines could provide insights in this area. Therefore, this research was designed to investigate the financial instruments that were

held by young student adults in their emergency fund. As found in the literature (see Chapter 3),⁴⁹ there were various financial instruments used in emergency fund.

This research had listed all financial instruments according to prior literatures (i.e. current account, savings account, money market account/fund, fixed-deposit account, stocks, bonds and Mutual funds) with additional financial instruments (i.e. gold) in the questionnaire to investigate the selections among young student adults. This research added gold as an instrument, noting its importance in Malaysian contexts.⁵⁰ Overall, the results indicate that over half of respondents (87%) specifically set aside their saving accounts for emergency purposes. Only a small number of respondents (31%) indicated that they held stocks in their emergency fund.

Figure 8.2: Type of Financial Instruments



⁴⁹ See Table 3.1 for a summary of example previous research on emergency fund financial instruments classification.

⁵⁰ See Chapter 3 on Malaysian contexts.

From the data it can be seen that the third highest instrument (71%) currently held by young student adults is gold. This result is consistent with the previous findings that gold is widely held for emergency purposes in Malaysia. It was also found to be held as an inheritance, as well for emergency use in the future (Banks, 1976). The selection of gold could be suggested to relate to the characteristic of the gold itself with its intrinsic value as a commodity (Kameel et al., 2006). There is evidence to support that the use of gold in the Islamic-based pawnshop (Ar-Rahnu) in Malaysia has increased over time (Ismail & Ahmad, 1997; Brau & Woller, 2004) and that customers are mainly aged between 21 and 30 (Mansor, Bashir Ahmad, Abu Bakar & Ismail, 2013). This demonstrates that holding gold is a common practice among young student adults in Malaysia and is increasing when it comes to fulfilling their emergency needs (Ahmad et al., 2012). This fills a gap that was left by the prevailing literature concerning gold as one of the financial instruments to be used in an emergency fund.

Table 8.2 further demonstrates whether gold holding is gender related. It is apparent from the table that 25.6% (45.3%) of male (female) have gold in their emergency fund. As mentioned in the literature review (see Section 3.3.1.1), Malaysian women tend to use gold as an instrument to cover their emergency needs. The Chi-square test, however, does not show any significant difference between gender and the holding of gold, hence turning out any association between the two.

Table 8.1: Crosstabulation Table for Gold Holding and Gender

Results			Gender		Total
			Male	Female	
Holding gold	Yes	Count	22	39	61
		% of Total	25.6%	45.3%	70.9%
	No	Count	4	21	25
		% of Total	4.7%	24.4%	29.1%
Total		Count	26	60	86
		% of Total	30.2%	69.8%	100.0%

$$[X^2 = 3.385 ; df = 1 ; P > 0.05]$$

Turning to the survey interview evidence, seven of the participants indicated that they have a saving account for their emergency fund, which is consistent with the questionnaire finding. With regard to gold, it is found that gold is a less likely preferred instrument by the participants in the survey interview, as is presented by the result summary in Table 9, Appendix 9 (i.e. only three participants mentioned gold in their responses). This inconsistency of findings between the questionnaire and survey interview is perhaps due to limited numbers of people that currently hold gold participating in the survey interview. By comparison, none of the participants mentioned stock, bond, money market account, or fixed deposit account as their financial instruments for their emergency fund. Previous studies found that asset-type holding is related to the hierarchy of financial needs. For instance, the preference of holding saving accounts indicates a lower level of financial need, which includes the survival needs before going to the growth stage (Xiao & Anderson, 1997).

8.3 Category of Emergency Fund

So far, previous sections have indicated the type of financial instruments held in emergency funds among young student adults. The following section will discuss the categories of all of these financial instruments. The purpose of categorising these instruments is to figure out the preferences of categories among young student adults.

As discussed in Chapter 3, emergency fund categories were based on their degree of liquidity, as firstly classified by Johnson and Widdows (1985), while no single study has discussed in depth the characteristic of this classification. All the instruments in this research, therefore, were categories as defined by extant literature. This research agrees that the liquidity characteristic is a satisfactory definition.

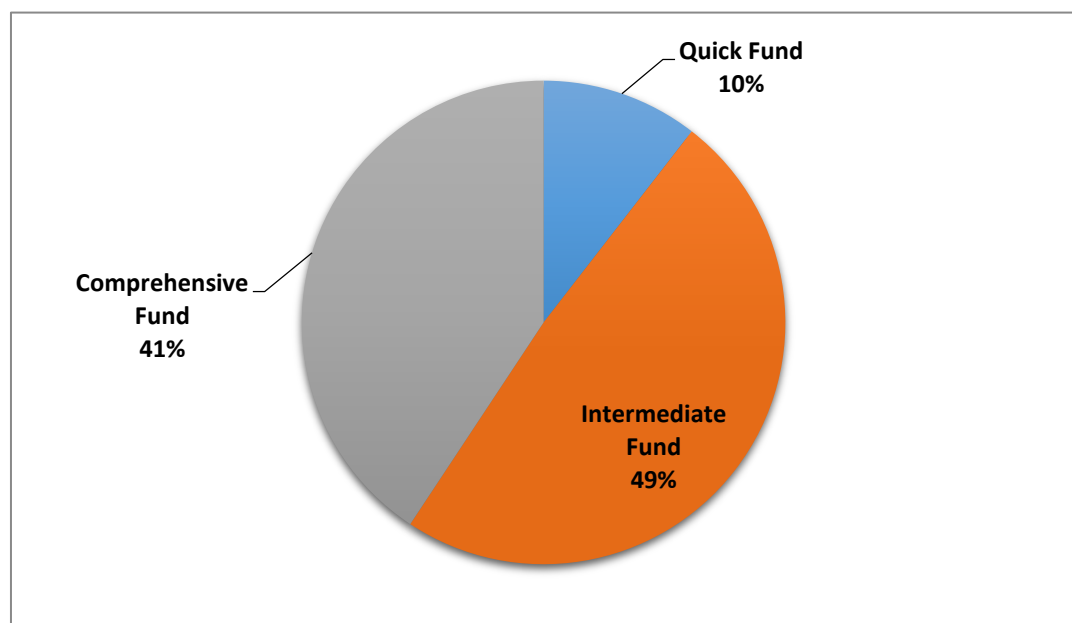
There are several issues worth noting when it comes to the classification of financial instruments. To date, however, the literature indicates that there were different categories of emergency fund.⁵¹ As has been mentioned before, this research tends to use the same categories proposed by Huston and Chang (1997): quick fund (assets held in savings, checking and money market accounts), intermediate fund (quick assets plus CDs and savings certificates) and comprehensive fund (intermediate assets plus the value of stocks and bonds). However, the definition of an intermediate fund has been modified for the Malaysian context of this research. For instance, in Malaysia, fixed deposit accounts are commonly offered, rather than CDs and savings certificates, then the term used differed from previous research. In addition, given that gold is a common financial instrument in Malaysia, it can be included as part of the intermediate fund category. Gold is more suited to this category because it is also used for other purposes,

⁵¹ See Table 3.1 for the example of literatures summarised on emergency fund categories.

such as collateral and the medium of exchange alongside its “liquid-cash” feature, and it is more liquid than stocks and bonds (Jaffe, 1989). Therefore this research positions gold in the intermediate fund category. Previous studies in the area of emergency fund have focused specifically on this classification. Therefore, this section could be argued to contribute to current understandings, as well as answering the research question.

Figure 8.3 (below) presents the results of the categories of emergency fund held by young student adults. It indicates that far larger proportions of young student adults are holding an intermediate or comprehensive fund rather than a liquid fund.

Figure 8.3: Category of Emergency Fund



From the survey interview, there were four participants that currently hold quick funds and comprehensive funds, while the remaining two participants hold an intermediate fund. This finding is inconsistent with the questionnaire findings. It must, therefore, be interpreted with caution because the categories of emergency fund are interrelated with

the financial instruments. Therefore, lack of holdings of a particular type of financial instruments among the participants (i.e. gold) contributed to the different findings.

However, comparing both results indicates that young student adults tend to hold more intermediate funds rather than comprehensive funds. These results contradict with Webley & Nyhus (2013b), who found that most of the young adults in their study had low-risk type savings rather than investment savings (which are riskier than liquid savings). As the study was carried out in Europe (developed countries), the contexts of this research may probably argue to provide different findings.

8.4 Chapter Summary

This chapter has discussed the findings that relate to sources, financial instruments and emergency fund categories. Most young student adults in this research used their PTPTN loan to allocate their emergency fund. The highest percentages of young student adults in this research choose to have savings and current accounts as their financial instrument in their emergency fund. In relation, this research also indicated that gold could be one of the financial instruments preferred during emergencies among the young in Malaysia; hence, the results present the supporting evidence. The findings also indicate that, contrary to expectations, gold-holding preferences were not significantly gender related. The definition of an intermediate fund was modified to fit the research context. The results show that this category of fund is the one most held among young student adults rather than a quick or comprehensive fund. Overall, the young student adults in this research context were not only able to allocate their emergency fund but also to hold at least an intermediate fund reflective of their wealth accommodation and their liquid assets in hand.

CHAPTER 9

SUMMARY AND CONCLUSIONS

9.0 Introduction

The final chapter of this research will take three parts. The first will summarise the thesis and its conclusions. The next will discuss the contributions of the study. Finally, the limitations are recognised and recommendations for future research are suggested.

9.1 Summary and Conclusion of the Research

The major objective of this research was to learn about the emergency fund provision behaviour among young student adults in Malaysia, focusing on the behavioural perspective. Its aims are twofold: to research emergency fund provision behaviour and cover allocation behaviour, alongside investigating the financial instruments that tend to be put aside as emergency fund. The second aim is to extend the discussion of the extant literature in the context of young student adults' emergency fund behaviours in Malaysia.

Chapter 2 focused on the discussion of emergency fund formation behaviour. The findings suggest that an understanding of financial behaviour in the young adult group is required. As Shiller (2006) emphasised, the failure of individuals to prepare for their future financial needs is reflected from their financial behaviour at a young age.

Previous studies found that only a few numbers of young adults could achieve adequate levels of emergency fund holding (Chang & Huston, 1995; Chang et al., 1997; Huston & Chang, 1997; Bi & Montalto, 2004). Although young adults had less adequate emergency funds, evidence was lacking regarding how young student adults actually

allocated their emergency funds; although some have argued that young adults have limited financial sources and a lack of financial knowledge (Cull & Whitton, 2011; Jariah et al., 2004; Shim, Xiao, Barber & Lyons, 2009).

Thus it can be seen that financial behaviour is complex, difficult to measure (Campbell, 2006) and challenging to understand (Hira, 2012). Therefore, it needs to be studied beyond the traditional finance and economic theories. Most studies on emergency funds tend to use theories such as life-cycle theory and precautionary saving motive theory to test the factors that contribute to the adequacy of emergency fund holdings, which are still unable to contribute to fully understanding of saving behaviour for emergency motives (Fisher, 2010). The observed factors, such as income (Bi & Montalto, 2004), preference (Chang & Huston, 1995), education level (Hong & Kao, 1997; Bhargava & Lown, 2006), ethnicity (Bi & Montalto, 2004; A. Worthington, 2005), marital status (Bhargava & Lown, 2006) and working status (Bhargava & Lown, 2006; Bi & Montalto, 2004; Rodriguez-Flores & DeVaney, 2007) were the tested factors in those studies. Those factors were found to be indirectly relate to the emergency fund formation among individuals.

Little has previously been discussed regarding the potential of behavioural factors in the emergency fund research. Therefore, this research uses the theory of planned behaviour (consisting of factors: i.e. attitude, subjective norms and perceived behaviour control) and an additional behaviour factor (i.e. propensity to plan) in developing the research framework and hypothesis to test the behavioural perspective on emergency fund holding. Since extant literature also suggests that young adults are usually influenced by factors that include financial knowledge, family, friends and health levels when

performing their financial behaviour, this could suggest the potential for this research to contribute new findings. Finally, this chapter discussed the reason why this research focused on young student adults in Malaysia. This research focused on those young student adults who have already performed emergency fund behaviour to investigate the potential significance and contribution of behavioural factors on emergency fund provision behaviour.

Chapter 3 investigated the categories of emergency fund and the type of sources that were used in previous studies on emergency fund. Four main categories were found to have been mentioned in recent studies: (i) quick fund; (ii) intermediate fund (iii) comprehensive fund and (iv) subjective fund (Rodriguez-Flores & DeVaney, 2007; Anong & DeVaney, 2010). This research further found that there is another financial instrument that can be included in the intermediate fund category, which is gold. It was uncovered that gold is very much relevant in providing the emergency needs in the Malaysian context (Amin, 2011; Amina, Chonga, Dahlana & Supinaha, 2007; Banks, 1976; Connor & Samuel, 2001).

Further, Chapter 4 discussed the research questions, research design, research framework and research instruments. Quantitative method research was chosen in order to understand the emergency fund provision behaviour among young student adults. In addition, the preliminary stage result (i.e. pilot study) was used to run the Exploratory Factor Analysis (EFA) procedure in order to verify the questionnaire and to ensure its reliability: this procedure followed the framework suggested by Hinkin (1998). The data analysis process was also explained, which involved CFA, SEM and Non-

Parametric tests for the actual questionnaire data and a word-based analysis method for survey interview data.

Chapter 5 focused on the Confirmatory Factor Analysis (CFA) for measurement model. This important step was required as part of the item development process of the questionnaire as noted by Hinkin (1998) and Hair et al., (2013): a six stage process. It is also the first part of a modelling process that provides three main assessments of the model's constructs that needed to be followed by researcher, which are unidimensionality, validity and reliability of the constructs (Awang, 2012b, p.47). This process confirmed that all constructs in the emergency fund formation measurement models achieved all the fitness index requirements. The final measurement model concluded that there were six constructs: emergency fund formation behaviour, intention, perceived behaviour control, propensity to plan, subjective norms and attitude. As the data passed the normality assessment, the Structural Equation Modelling (SEM) was run for further data analysis.

In Chapter 6, the SEM was run and the findings were discussed. Attitude and propensity to plan (short- and long-term) were found to significantly contribute to intention and emergency fund formation behaviour. This was supported by survey interview findings. These reflected that subjective norm (i.e. family, friends, culture and religion) and perceived behaviour control (i.e. ability, income and government policies) did not contribute to the decision to form an emergency fund among young student adults. Understandings of emergency fund preparations among young student adults were discussed further in this chapter, with the definition of emergency events among young student adults also being framed.

Chapter 7 explored how frequently young student adults allocated their emergency fund and the financial behaviours that were involved in this allocation. This chapter also discussed the adequacy of the emergency fund held by young student adults, including noting how the young student adults of the sample had survived previous emergencies and how this affected their planning for future emergencies. It then discussed the relationship between adequate provision and previous emergency experience. The concept of financial aid was also introduced and discussed. It found that adequacy levels were related to previous experience and had a significant relationship to financial aid among young student adults.

Chapter 8 covered three major topics: (i) the sources of finance used by young student adults to allocate their emergency fund; (ii) the type of financial instruments that they chose to include in their emergency fund; and (iii) the categories of emergency fund that were held by young student adults. Overall, most of the respondents used their student loan money to allocate their emergency fund, and also other sources such as scholarships, income and money from family and friends. Savings and current accounts were preferred as emergency fund instruments. Also, gold was noted as another financial instrument to be included in the emergency fund. This chapter also indicated that the respondents preferred to hold an intermediate fund rather than a quick or comprehensive fund.

9.2 Summary of Research Questions' Answers

This subsection will discuss the summarised answers of the research questions.

9.2.1 Research Question 1

The first research question was as follows: What is the effect of behavioural factors (i.e. attitude, subjective norm and perceived behavioural control) towards the intention to form and emergency fund formation behaviour among young student adults?

SEM was used to answer the research question. The Emergency Fund Formation Behaviour (EFFB) models in Figures 6.1 and 6.3 revealed that only attitude has a significant effect towards intention and emergency fund provision behaviour. There was a similar finding in the survey interview results. Several studies have suggested that attitude significantly contributes to general saving motives (Garcia et al., 2011; Soyeon Shim et al., 2012). However, Lim (2011) has found that this is not the case in Malaysia. In addition, the results from the EFFB models and survey interview indicated that subjective norms and perceived behaviour control show the insignificant effect to intention and emergency fund formation behaviour among young student adults. This research was found to contradict previous studies, which have suggested that factors such as family contributed to financial decisions – making process among young adults (Shim et al., 2009). These expectations include saving for retirement (Van Schie et al., 2012) and, in general, saving motives (Friedline, Elliott & Nam, 2011; Webley & Nyhus, 2013). This also could be found to contradict the study by Serido, Shim, Mishra & Tang, (2010), which found that young student adults' financial decisions were driven by their parents' expectations, although they were starting at college. In addition, this research also contradicted the findings of Soyeon Shim et al., (2012), which found that perceived behavioural control significantly contributed to saving and behavioural intentions.

9.2.2 Research Question 2

The second research question was as follows: Does propensity to plan have an impact on the intention to form and emergency fund formation behaviour among young student adults?

Propensity to plan was tested using SEM, and it shows the significant effects towards both intention and emergency fund formation behaviour among young student adults (see Figures 6.1 and 6.3). This finding contributes to the understandings of current literature. Planning to allocate emergency fund was proven to encourage young student adults towards emergency fund preparation. Results from the survey interview show similar findings. This could be suggested to relate to the findings from previous studies, which found that propensity to plan does increase an individual's wealth (Ameriks et al., 2002) and makes young adults diversify their portfolio (Fessler et al., 2007).

9.2.3 Research Question 3

The third research question was as follows: How do young student adults prepare for emergency fund or for future emergencies?

In answering this research question, the two main findings were highlighted: 1) the method of emergency fund formation behaviour among young student adults and; 2) the adequacy of emergency fund holdings among young student adults.

The CFA (see Chapter 5) confirmed that emergency fund behaviour tends to consist of two main financial behaviours: saving and investment. Open-ended survey interview results revealed that most young student adults in this research were found to prefer performing savings and investment on an *ad hoc* basis rather than regularly or within

specific timeframes. However, there was still evidence that 10.5% did save every month for emergencies, along with four of respondents in the survey interview sample. This can be compared with the findings that those who have regular savings habits are less likely to save for emergency fund saving motive (Cho et al., 2007). However, this contradicts with the findings that the emergency saving motive was found to contribute to regular savings behaviour (Fisher & Montalto, 2010).

This research also found that very few young student adults achieved the adequate level of emergency fund holding, recommended as being equal to three months expenses. The results indicate that 36% of respondents and only two out of ten participants achieved the adequacy level. In relation, this research finds that those who have previous experience of emergency events significantly differ from those who did not in order to have adequate emergency fund, parallel with previous studies which suggested that previous experiences do contribute to saving for an emergency (Babiarz & Robb, 2014) and does less in terms of saving for an emergency (Scheresberg, 2013). This research also found that financial aid does not determine the adequate level of emergency fund holding, as there were no significant differences. This is also contrary to the findings by Friedline, Elliott & Chowa, (2013), which indicated that young adults who received financial aid, such as allowances from their family, were less likely to have savings.

9.2.4 Research Question 4

The fourth research question is: What are the preferred sources of emergency fund among young student adults?

To answer this research question, three main findings cover related matters: What source of income did young student adults use to allocate their emergency fund, what financial instruments did they chose to include in their emergency fund holding, and what categories of emergency fund were held by young student adults?

It was found that the financial sources that most young student adults in this research used to allocate their emergency fund were their student loan (PTPTN) rather than other sources, especially from family or friends. It also could be suggested that in this research student loans were found to become very important sources to help young student adults to allocate their emergency fund. However, the borrowing item was removed from the emergency fund formation behaviour construct; this further limited the explanation of the significant effect of the borrowing behaviour related to the emergency fund formation behaviour.

In reviewing the literature, no data was found that covered in detail the income sources that young student adults used to allocate their emergency fund. This research concluded that there are six categories of financial sources used by young student adults to form their emergency fund: student loan, scholarship, salary, income from family, salary combined with student loan and income from family combined with scholarship. This finding provided an important starting point for forthcoming research in this area, since no comparable study is thought to exist elsewhere.

In detailing the financial instruments used in emergency fund by young student adults, it was found that most of them prefer to allocate a savings account as their emergency fund instrument. This may be related to the lower financial needs among young adults, which cover the survival needs before moving to the growth stage (Xiao & Anderson,

1997). It was also found that stocks tend not to be held as emergency fund. This research also found that gold was something else that was considered as an emergency fund financial instrument; the third most preferable financial instrument in this research context. Previous studies examined do indicate that young adults in Malaysia commonly hold gold for their future emergency needs (Ahmad et al., 2012).

In categorising the instruments in relation to emergency fund, this research contributes to an additional definition of intermediate emergency fund category. The additional of gold to this category parallels with the main categorisation of financial instruments in emergency fund categories by Johnson and Widdows (1985): it's based on their degree of liquidity. The characteristics of gold, such as intrinsic value as a commodity (Kameel et al., 2006) and more liquid than stocks and bonds (Jaffe, 1989) was found appropriate to be included into intermediate fund. Thus the results indicating that young student adults in this research tend to hold an intermediate emergency fund contradict with Webley & Nyhus's (2013b) finding that most young adults in their study tended to have low-risk type savings rather than investment savings.

9.3 Contributions of the Research

This section highlights the contributions of this research to the current literature.

9.3.1 The Importance of Emergency Fund Research

This research argues that young student adults have emergency funds, but that emergency fund allocation among young adults in Malaysia has to be encouraged, as many are unlikely to have them. The older generation in Malaysia have been found mostly to have emergency funds. Yin-Fah & Masud (2010) found that only two out of

every ten of their respondents who were over 60 years old did not have an emergency fund. This suggests that over 50% of older people in Malaysia hold an emergency fund. However, most of them hold a fund below the recommended level, indicating that they may ultimately be short of money in this stage of life. They further argue that this situation then leads some of them to borrow from loan sharks, leading them to have financial problems at the end of their life-cycles. Therefore, this research could contribute to encouraging young student adults to prepare an emergency fund. This may help to understand how they may be able to allocate an emergency fund, although it appears that young adults were claimed by a previous study (i.e. Rodriguez-Flores & DeVaney, 2007) to have less resources to save or invest for emergencies. This thesis, which mainly focuses only on the successful side of emergency fund allocation behaviour among young student adults, examines the behavioural factors that may help them to understand what prompts them to successfully prepare an emergency fund.

Given that the issue of adequacy level of emergency fund is a problem in older people in Malaysia, the importance of allocation and formation among the young needs to be a focus. It could be argued that having an emergency fund from an earlier age cannot be ignored. Hence, if young adults do not prepare and hold an emergency fund, the objective of achieving an adequate level of emergency fund in older age becomes less possible. Therefore, this research is mainly designed to understand and investigate the main factors that contribute to the success of emergency fund formation among young student adults to find the level of adequacy that young student adults in this research context could achieve.

This research could be argued to focus on a different direction when discussing the perspective of emergency fund holding. The main focus of previous studies was the adequacy level of emergency fund, rather than starting with the question of how individuals allocate their emergency fund, which is the main objective of this research. This research also provides an additional perspective towards emergency fund allocation behaviour among young adults. For instance, students were selected as the sample in this research, rather than other cohorts of young adults who could be predicted have less commitment than others. Students were always underestimated in the thinking that they are less committed to savings behaviour, which has led to studies on savings among students receiving a lack of intention among researchers (Tuvevsson & Yu, 2011). However, studies have found that those with less commitments do have more savings, for example young couples without children have been found to save more when compared to couples with children (Fisher & Anong, 2012). Besides, fewer of those with child commitments had the recommended adequate level of emergency fund holding (Huston & Chang, 1997; Bhargava & Lown, 2006). Therefore, more commitment could be suggested to reduce the ability to save for emergencies and therefore achieve the adequate level of emergency fund (Bi & Montalto, 2004), which may increase borrowing behaviour among the young (Rutherford & DeVaney, 2009). Thus, it could be suggested that those who have less commitments should be encouraged to prepare and allocate their emergency fund. This research also found that single young student adults were more likely to allocate an emergency fund, and income factors were less of an obstacle when it comes to encouraging young student adults to allocate their emergency funds. Therefore, this research could contribute to

important findings to encourage the emergency fund formation behaviour among young adults before the adequacy levels are focused.

The serious focus should be on those in the age group of 22 to 25 years old who are currently studying for their degrees. Although previous studies found that this group may save less because they will have permanent jobs and high salaries in future; previous studies have failed to show this. This is because the job market in most developing countries can be argued to face issues, such as low employment and uncertain earning levels with long working hours, especially in the private sectors (Behrman, 1999). Malaysia, as a developing country, may be affected by these factors. Thus, young student adults may potentially face those issues at any time.

9.3.2 The Development of Emergency Fund Formation Behaviour Measurement Scale

This research can serve as a starting point for future studies on emergency funds considered from a behavioural perspective, especially when it comes to testing latent constructs. The measurement scales used have been successfully developed and therefore may contribute to future studies in this field. The scales in this research were developed carefully following the framework proposed by Hinkin (1998). The process tested the reliability, validity and unidimensionality of the constructs.

Exploratory Factor Analysis (EFA) was carried out using the pilot study data to explore the items for every construct in the measurement scale. Confirmatory Factor Analysis (CFA) was used for the confirmatory analysis using the actual study data. Two stages of data collection were carried out, since it recommended that the data used to run both analyses should be different and avoid recycling the data (Matsunaga, 2011). The scales

(see Chapter 5) achieved convergent validity, construct validity, discriminant validity, internal reliability and construct reliability, which also meant they achieved the Goodness of Fit Indexes (GFI) and Incremental Fit Indices. Then, the researcher can confidently claim that the research scale that this research used well-presented all the items under the latent factors with the current data (Matsunaga, 2011).

This research has demonstrated that emergency fund behaviour involves two main financial behaviours: saving and investment (see Figure 5.7). As such, this work contributes to the existing knowledge on given definitions of emergency fund by providing clear financial behavioural actions that represented emergency fund provision behaviour. Additionally, it is clear that emergency funds not only consist of individual's savings but also of their investments. Previous studies have tended to focus on their emergency savings, because the main point about savings is that they are generally liquid and easy to access in case of emergency. Nevertheless, some investment products can be also be viewed as liquid, or at least easily convertible to cash.

Still, it can be suggested that future studies adopting the measurement could use better wording in their questionnaires. Some questions in this research may exhibit the problems of leading questions, such as asking the respondents if they think that they may use gold as an instrument in their emergency fund. Relating to this, the question that asked about the financial sources might in future provide more space for respondents, reducing the potential of a leading question problem, rather than stating the options within in the question. Another issue could be found in defining items in the questionnaire, for instance items for subjective norms. The definition may potentially be misleading to the respondent. Therefore, future research could suggest looking for

better ways to word this question. Although this research suggests the insignificance of subjective norm effect towards emergency fund formation behavior, and the survey interview shows similar findings, this question could be modified for clearer item development.

However, future research will have to test the reliability and validity of the scale if different samples are used, as they may contribute to different findings and require new verification. The addition of new items or constructs for use in future may also require testing. For instance, cross-validation⁵² was not done using this measurement.

9.3.3 Model Contribution: The Backgrounds of Emergency Fund Formation Behaviour Models (EFFB Models)

The Emergency Fund Formation Behaviour Models (EFFB Models) were successfully developed in this research. This is the main contribution of this research to current financial planning literature. The models achieved the fitness index required, which indicates that they are valid. However, the models are still new and were pioneered in this study, as no models had been previously developed to test the behavioural factors that influence emergency fund formation behaviour.

The results indicate that there is a need for future research to test the models with additional variables and within different contexts. This is represented by low R^2 on the effect of exogenous to endogenous variables, with or without a mediator representing in both models (i.e. respectively 11% and 19%). The theory was proven to fit to the model; however, no mediation effects were found to influence this research context.

⁵² The generalisation of the results only could be achieved after the scales are tested again, for example, using the different samples (Field, 2013).

Although the model showed an acceptable fit, it still cannot be generalised to other samples or populations (Hair et al., 2013). This is because the model development strategy took the theoretical view as its starting point and might go through some modifications of the structural or measurement models. Therefore, further research is suggested to verify the model in different contexts and samples.

This research found that attitude and propensity to plan directly influence the intention of young student adults to prepare for an emergency fund. The models also proved that attitude, propensity to plan and intention significantly directly contributed to emergency fund allocation behaviour by young student adults (see Figures 6.1 and 6.3).

9.3.4 Factors that Contributed to Emergency Fund Provision Behaviour

Beside its modelling contribution, this research has also contributed to a different traditional understanding of emergency fund study, which is the behavioural horizontal. The research carried out was from this point of view required, as it could present clear views of self-control on saving behaviours (Kennickell, Starr-McCluer & Sundén, 1997). This section discussed the findings from questionnaire and survey interview. It concluded that the factors that contribute to intention to form an emergency fund and emergency fund formation behaviour are attitude and (short- and long-term) propensity to plan.

From the EFFB model, subjective norms and perceived behaviour control were found not to contribute to intention and emergency fund formation behaviour. This reflects that the financial aid is also not the factor in holding an adequate level of emergency fund among young student adults. In other words, factors such as family, friends and income from family did not contribute to intention and action. It can thus be suggested

that young student adults who allocate their emergency fund in this research context are ready to transition into adulthood: able to make their own financial decisions and self-believing in their financial behaviour (Serido et al., 2013). In addition, the previous emergency experience was found to significantly contribute to the difference in adequacy levels of emergency fund holdings among young student adults.

9.3.4.1 The Definition of Expenditure Shock by Young Student Adults

Previous studies have used the general definition of an emergency event to also define the purpose of having an emergency fund. This definition was suggested by Johnson & Widdows (1985). Occurrences such as sudden unemployment and illness become the main definition of an emergency event. However, from the survey interview carried out in this research context, young student adults revealed wider understandings and definitions of emergency events. Other emergency events include accidents, medical costs, maintenance, unexpected bills, death, charity and leisure events that might require immediate money. Thus, as an emergency can cover a wide range of situations (Collins, 2015), the present research confirms both previous findings and the need for further contributions to its definition. From the additional definition above, after considering the Malaysian context (see Section 2.7), the emergency fund sounds important to help young student adults to survive in future emergencies. This is because, in Malaysia, it was found that individuals are provided with less access to some benefits, for instance the healthcare benefit for citizens. Therefore, the research findings suggest parallels that could potentially be studied in future. This is the first study to report clear financial difficulties that young student adults may face in Malaysia if they are not prepared.

9.3.4.2 Financial Sources and Instruments for Emergency Fund among Young Student Adults

The findings on the sources that are used by young student adults to allocate their emergency fund could present an avenue for future research. Young student adults were found to use six types of financial sources: student loan, scholarship, salary, income from family, salary with student loan, and income from family alongside scholarship in their emergency fund provision behaviour.

In terms of financial instruments that tend to be allocated for emergency fund, instruments such as gold were widely accepted, becoming one reason that reflected young student adults in this research context able to diversify at least their assets holding for emergency purposes.

9.4 Implications of the Research

9.4.1 Implications for the Financial Market

In general, this research provides a useful insight into the personal financial planning area and future emergency fund studies. The implications of this research are pertinent to several parties. The implications to the financial market in Malaysia, for example, banks and financial institutions could possibly introduce some short-term emergency savings programmes to increase the emergency saving awareness among young student adults. Such programmes (i.e. MyPath Savings) were successful in the U.S. in helping this cohort to increase their interest, ability and desire to have savings, despite possessing limited income (Loke et al., 2015). In addition, it may prompt the design of other product features that also probably fit this low-income group to save for emergencies (Abbi, 2012). Instead of focusing on general wide saving motives,

specialisation in emergency preparation could reduce the large total amount that usually needs to be allocated, making it seem more possible and practical for young student adults to fulfil.

As indicated before, most of the young student adults in this research use their student loan to allocate their emergency fund. This suggests a role for PTPTN (the official education loan body provided by the Malaysian government) through their saving-investment product (SSPN)⁵³ in encouraging students to specify their profits as their emergency fund might help. The focus should be on prompting awareness, alongside more instruments for friendly savings and investment for young student adults. This loan could be a more verity saving-investment option to encourage and help young student adults to save and invest for their emergency funds. As a government agency, this may ultimately prove beneficial for both parties: the citizen and the country.

In relation, encouraging young student adults to allocate an emergency fund by using some assets, such as gold, might be potentially beneficial. This is because gold was identified as one of the preferred instruments for an emergency fund. For example, gold-type products (i.e. Gold Dinnar) that are currently available in Malaysia could be designed to be more young adult friendly and aim to be more widely accepted throughout the financial market framework. Having more alternative gold-based products to choose for their emergency fund could be helpful to young student adults.

⁵³ Saving instruments that are compulsory to their entire borrower: using the Syariah concept (*Wakalah Bil Istithmar*), with PTPN as the representative to manage the saving money to invest on behalf of the depositor. <http://www.ptptn.gov.my/web/guest/simpanan> (retrieved 5 August 2015).

9.4.2 Implications for the Practitioner and Financial Educator

As found by previous studies (Elmerick et al., 2002; Marsden et al., 2011), students from a higher education background were more likely to seek the advice of a financial planner. This research, therefore, focused on university students and it could be predicted that this group may potentially require the services of a financial planner in future. As this research findings reflect specifically on the factors, and overall on emergency fund behaviour, the basic understanding of this group may develop. This might help financial planners to design effective advice and guidelines for their young adult clients, which might ultimately impact on their emergency fund allocation and holding behaviour.

Another important practical implication of this research finding might help educational organisations to encourage an attitude among young student adults towards emergency savings and investment: especially in designing or upgrading current modules to increase awareness of understanding planning and budgeting for emergency purposes. AKPK, for instance, may develop a specific module on emergency fund preparation, as currently most of their programmes are aimed at university students in Malaysia. Additionally, educational organisations, such as universities, may also target students from more diverse backgrounds, especially non-business (such as engineering and sciences) students, in offering additional financial management courses. This is because this research has shown that non-business students were reported to allocate more emergency funds.

9.5 Limitations and Recommendations for Future Research

9.5.1 Data Collection and Analysis Method

This research used online survey tools to reach the target population who had an emergency fund. Future studies into emergency fund provision behaviour could perhaps use different tools of data collection if a specific sample frame was targeted, because the web survey did not solve the problem of declining response rates (Couper & Miller, 2009; Sauermann & Roach, 2013).

In this research, both results indicate mixed conclusions. There are several possible explanations for this. The participants of this survey interview again only represented some of the respondents of the questionnaire. For example, although the survey interview was offered to all respondents of the questionnaire, only a few participated. This is probably the reason for the inconsistency of the findings. However, Onwuegbuzie & Johnson (2006) argue that the validation of the interview results could be satisfied if the sample used in the interview was from the same sample as the questionnaire. Back to this research, the survey interview and questionnaire data derive from the same sampling frame.

One of the techniques that could be used when comparing qualitative and quantitative data for a concurrent approach is side-by-side data analysis (Creswell & Clark, 2011). In this, researchers divide the data into the same theme for comparison during the analysis stage, with qualitative data transforming into quantitative scores. Since the main objective of mixed method research is to avoid pluralism of perspective, the political legitimate could be achieved when it comes to provide the workable solution, although the results show the mixture (Onwuegbuzie & Johnson, 2006). Then, the

interview results could be used to provide a depth of understanding, rather than for generalisation purposes. Therefore, future research may use different interview data collection methods, which may serve a larger aspect of the emergency fund research area. With more participants, different analysis techniques might be used, such as concept–mapping analysis, which may in turn help to better understand different sample groups (Ryan & Bernard, 2003).

9.5.2 Sampling

The sample size in the current research, although adequate for analysis, is considered to be small. However, this was a consequence of time constraints above any other factor. With the hidden population from which the sampling frame is unknown, the data drawn was very limited. However, besides using the chain-referral data collection method, issues such as bias could be mitigated, since the samples are theoretically proven wholly independently (Heckathorn, 1997) and data was widely distributed. Critical issues, such as the distributional properties of measures in SEMs, were countered using Maximum Likelihood (ML) estimation procedure. This required multivariate normality to indicate that the sample size is meaningful and acceptable (Bagozzi & Yi, 2011).

Nevertheless, a larger sample could be required in future studies to manipulate more factors in the model, since a more complicated model may need a larger sample size to work (Hair et al., 2013). The results of this research may also be limited by the scope of the research sample and its context. For example, although university students are an important subpopulation in the discussion of financial behaviour, their experiences may not be representative of young adults in general. As such, future research should look at a broader population.

Additionally, future studies should test the models across different sampling backgrounds. The first-generation college students mainly come from low-income families and are financially independent, which were found to better understand the importance of emergency savings (Kabaci & Cude, 2015) and this therefore might affect their approaches to allocating an emergency fund.

Further studies could also test how the models works on the other age stages: given that other studies, such as Kennickell et al., (1997) claimed that individuals have different concerns about saving for uncertain health and income as they grow older.

9.5.3 Indicators or Factors

Factors such as race or ethnicity may be related to emergency fund behaviour, given that a previous study by Hong & Kao (1997) has indicated that Asian-Americans are more likely to have higher levels of adequate emergency fund than any other ethnicity in America. In addition, the factors that relate to assets-type holdings for emergency funds could do with some reflection, as a previous study found that those who have degree-level educations tended to hold a number of assets, including holding stock (Xiao, 1996). Health factors were also found to relate to emergency fund holdings (Cho et al., 2007). Future research could also look at other variables in constructing its models, such as the sample's financial knowledge background, which has been found to impact on emergency fund holding (Hilgert, Hogarth & Beverly, 2003b).

In addition, this research excluded those who did not have an emergency fund to be counted in this research. Therefore, several results, such as the effect of intention as the contribution factors for emergency fund allocation behaviour for young student adults, need to be discussed with extreme caution. The impact of intention to allocate was

found to contribute to those who have emergency fund only and ignored the intention to allocate emergency fund that probably occurs among those that did not have an emergency fund at all. Future research may include both those who already have and those who do not have an emergency fund in order to draw the comparison.

In other points, future research may focus in detail on how young student adults handle their financial emergency needs. This may contribute to a greater understand of financial behaviour among this group. Future studies should also compare the emergency fund behaviours after the Malaysian Goods and Service Tax (GST) has been implemented in Malaysia in April 2015. This policy may have an effect on monthly expenses and thus may impact emergency fund formation behaviour.

REFERENCES

- 1Malaysia Products. (2015). <http://www.1malaysia.com.my/en/1malaysia-products-1>. *1Malaysia*. Retrieved April 13, 2015, from <http://www.1malaysia.com.my/en/1malaysia-products-1>
- Abbi, S. (2012). A Need for Product Innovation to Help LMI Consumers Manage Financial Emergencies. *Allston, MA: Doorways to Dreams Fund*.
- Abdul Hak, N. (2012). Right of women to mahr (dower) under Islamic Law and Malaysian family law: Some suggestions for reform. *Journal of Islamic Law Review*, 1–17. Retrieved from <http://irep.iium.edu.my/6535/>
- Ahmad, B., Mansor, N., & Nadiah, N. (2012). Customer acceptance on Islamic pawn broking: A Malaysia case. *Interdisciplinary Journal of Contemporary Research Business*, 3(10), 748–763. Retrieved from <http://journal-archives15.webs.com/748-763.pdf>
- AICCCA. (n.d.). About AICCCA. Retrieved from <http://www.aiccca.org/>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. doi:[http://dx.doi.org/10.1016/0749-5978\(91\)90020-T](http://dx.doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32(4), 665–683. doi:10.1111/j.1559-1816.2002.tb00236.x
- Ajzen, I. (2011). The theory of planned behaviour: Reactions and reflections. *Psychology & Health*, 26(9), 1113. doi:<http://dx.doi.org/10.1080/08870446.2011.613995>
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- AKPK. (2011). AKPK launches POWER! OLP for easier access to financial education. Retrieved from <http://www.akpk.org.my/happenings/news/press-release/id/265/akpk-launches-power-olp-for-easier-access-to-financial-education>
- Altfest, L. (2004). Personal financial planning: Origins, developments and a plan for future direction. *The American Economist*, 48(No. 2 (Fall, 2004)), 53–60. Retrieved from <http://www.jstor.org/stable/10.2307/25604301>
- Ameriks, J., Caplin, A., & Leahy, J. (2002). *Wealth Accumulation and the Propensity to Plan*. Retrieved from <http://www.nber.org/papers/w8920>
- Amin, H. (2011). Modelling Ar-Rahnu use in eastern Malaysia: Perspectives of muslimah. *Journal of Islamic Economics, Banking and Finance (JIEBF)*. Retrieved from http://ibtra.com/pdf/journal/v7_n3_article4.pdf

- Amina, H., Chonga, R., Dahlan, H., & Supinaha, R. (2007). An Ar-Rahnu shop acceptance model (ARSAM). *Labuan E-Journal of Muamalat and Society*, 1, 82–94. Retrieved from <http://www.iefpedia.com/english/wp-content/uploads/2011/03/AN-AR-RAHNU-SHOP-ACCEPTANCE-MODEL.pdf>
- Ando, A., & Modigliani, F. (1963). The “life cycle” hypothesis of saving: Aggregate implications and tests. *The American Economic Review*, 53(1), 55–84. Retrieved from <http://www.jstor.org/stable/10.2307/1817129>
- Anong, S. T., & DeVaney, S. A. (2010). Determinants of adequate emergency funds including the effects of seeking professional advice and industry affiliation. *Family and Consumer Sciences Research Journal*, 38(4), 405–419. doi:10.1111/j.1552-3934.2010.00035.x
- Anong, S. T., & Fisher, P. J. (2013). Future orientation and saving for medium-term expenses. *Family and Consumer Sciences Research Journal*, 41(4), 393–412. doi:10.1111/fcsr.12026
- ASIC. (2011). Promoting financial success in the United States. Retrieved from [http://www.treasury.gov/resource-center/financial-education/Documents/NationalStrategyBook_12310 \(2\).pdf](http://www.treasury.gov/resource-center/financial-education/Documents/NationalStrategyBook_12310%20(2).pdf)
- Aspalter, C. (2006). The East Asian welfare model. *International Journal of Social Welfare*, 15(4), 290–301. doi:10.1111/j.1468-2397.2006.00413.x
- Atkinson, R., & Flint, J. (2004). *The SAGE Encyclopedia of Social Science Research Methods*. (Michael Lewis-Beck, Alan E Bryman, & Tim Futing Liao, Eds.). Sage Publication. doi:10.4135/9781412950589
- Australia Government. (2014). Payments For Job Seekers. Retrieved April 12, 2015, from <http://www.humanservices.gov.au/customer/subjects/payments-for-job-seekers>
- Awang, Z. (2012a). *Research Methodology and Data Analysis*. Penerbit Universiti Teknologi MARA Press.
- Awang, Z. (2012b). *Structural Equation Modeling Using Amos Graphic*. Penerbit Universiti Teknologi MARA.
- Aziz, A., & Shamsul, A. (2004). The religious, the plural, the secular and the modern: A brief critical survey on Islam in Malaysia. *Inter-Asia Cultural Studies*, 5(3), 341–356. doi:<http://dx.doi.org/10.1080/1464937042000288651>
- Babiarz, P., & Robb, C. A. (2014). Financial literacy and emergency saving. *Journal of Family and Economic Issues*, 35(1), 40–50. doi:10.1007/s10834-013-9369-9
- Bagozzi, R. P., & Yi, Y. (2011). Specification, evaluation, and interpretation of structural equation models. *Journal of the Academy of Marketing Science*, 40(1), 8–34. doi:10.1007/s11747-011-0278-x

- Bakir, A., Rose, G. M., & Shoham, A. (2006). Family communication patterns. *Journal of International Consumer Marketing*, 19(2), 75–95. doi:10.1300/J046v19n02_05
- Baltar, F., & Brunet, I. (2012). Social research 2.0: Virtual snowball sampling method using Facebook. *Internet Research*, 22(1), 57–74. doi:10.1108/10662241211199960
- Baltussen, G. (2009). Behavioral finance: An introduction. *SSRN Electronic Journal*. doi:10.2139/ssrn.1488110
- Banks, D. J. (1976). Islam and inheritance in Malaya: Culture conflict or Islamic revolution? *American Ethnologist*, 3(4), 573–586. doi:10.1525/ae.1976.3.4.02a00020
- Bansal, H. S., & Taylor, S. F. (2002). Investigating interactive effects in the theory of planned behavior in a service-provider switching context. *Psychology and Marketing*, 19(5), 407–425. doi:10.1002/mar.10017
- Behrman, J. R. (1999). Labor markets in developing countries. *Handbook of Labor Economics*, 3, 2859–2939. doi:10.1016/S1573-4463(99)30029-8
- Benefits.gov. (n.d.). Employment/Career Development Assistance (119). Retrieved April 10, 2015, from <http://www.benefits.gov/benefits/browse-by-category/category/CDA>
- Beverly, S. G. (2013). Asset building for and by young people. *Economics of Education Review*, 33, 52–57. doi:10.1016/j.econedurev.2012.07.008
- Bhargava, V., & Lown, J. M. J. (2006). Preparedness for financial emergencies : Evidence from the Survey of Consumer Finances. *Financial Counseling and Planning*, 17(2), 17–26.
- Bi, L., & Montalto, C. (2004). Emergency funds and alternative forms of saving. *Financial Services Review*, 13(2), 93–110.
- Black Jr, K., Ciccotello, C. S., & Skipper Jr, H. D. (2002). Issues in comprehensive personal financial planning. *Financial Services Review*, 11(1), 1–9. Retrieved from http://www2.stetson.edu/fsr/abstracts/vol_11_num1_p1.pdf
- BNM. (2012). Outlook and Policy in 2013. Retrieved from www.bnm.gov.my/files/publication/ar/en/2012/cp04.pdf
- Brau, J. C., & Woller, G. M. (2004). Microfinance: A comprehensive review of the existing literature. *Journal of Entrepreneurial Finance, JEF*, 9(1), 1–27.
- Browne, M. W., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods & Research*, 21(2), 230–258. doi:10.1177/0049124192021002005
- Burns, E. (2010). Developing email interview practices in qualitative research.

- Sociological Research Online*. Retrieved from <http://www.socresonline.org.uk/15/4/8.html>
- Byrne, B. (2010). *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming* (2 nd.). Routledge.
- Campbell, J. Y. (2006). Household finance. *The Journal of Finance*, 61(4), 1553–1604. doi:10.1111/j.1540-6261.2006.00883.x
- Canova, L., Rattazzi, A. M. M., & Webley, P. (2005). The hierarchical structure of saving motives. *Journal of Economic Psychology*, 26(1), 21–34. doi:10.1016/j.joep.2003.08.007
- CFP Board. (n.d.-a). About CFP board. Retrieved from <http://www.cfp.net/about-cfp-board/about-cfp-board/history>
- CFP Board. (n.d.-b). Financial planning. Retrieved from <http://www.cfp.net/for-cfp-professionals/professional-standards-enforcement/compliance-resources/frequently-asked-questions/financial-planning>
- Chang, M. L. (2005). With a little help from my friends (and my financial planner). *Social Forces*, 83(4), 1469–1497. doi:10.1353/sof.2005.0061
- Chang, Y. R., Hanna, S., & Fan, J. X. (1997). Emergency fund levels: Is household behavior rational. *Financial Counseling and Planning*, 8(1), 47–55.
- Chang, Y. R., & Huston, S. J. (1995). Patterns of adequate household emergency fund holdings: A comparison of households in 1983 and 1986. *Financial Counseling and Planning*, 6, 119–128.
- Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial Services Review*, 7(2), 107–128. doi:10.1016/S1057-0810(99)80006-7
- Cheung, G., & Lau, R. (2007). Testing mediation and suppression effects of latent variables: Bootstrapping with structural equation models. *Organizational Research Methods*, 11(2), 296–325. doi:doi: 10.1177/1094428107300343
- Chieffe, N., & Rakes, G. K. (1999). An integrated model for financial planning. *Financial Services Review*, 8(4), 261. doi:http://dx.doi.org/10.1016/S1057-0810(00)00044-5
- Chiteji, N., & Stafford, F. (1999). Portfolio choices of parents and their children as young adults: Asset accumulation by African-American families. *The American Economic Review*, 89(2), 377–380. doi:http://dx.doi.org/10.1257/aer.89.2.377
- Cho, S. H., Fang, M. C., & Hanna, S. D. (2007). Who has emergency saving goals? *Consumer Interests Annual*, 53.
- Chudry, F., Foxall, G., & Pallister, J. (2011). Exploring attitudes and predicting

- intentions: Profiling student debtors using an extended theory of planned behavior. *Journal of Applied Social Psychology*, 41(1), 119–149. doi:10.1111/j.1559-1816.2010.00705.x
- Collins, J. (2015). Paying for the unexpected: Making the case for a new generation of strategies to boost emergency savings, affording contingencies, and liquid resources for low-income families. In J. M. Collins (Ed.), *A Fragile Balance: Emergency Savings and Liquid Resources for Low-Income Consumer* (pp. 1–17). Palgrave Macmillan.
- Connor, L., & Samuel, G. (2001). *Healing powers and modernity: Traditional medicine, shamanism, and science in Asian societies*. Greenwood Publishing Group.
- Conover, C. M., & Jensen, G. (2009). Can Precious Metals Make Your Portfolio Shine? *Journal of Investing*, 18(1), 75–86. doi:http://dx.doi.org/10.3905/JOI.2009.18.1.075
- Couper, M. P., & Miller, P. V. (2009). Web Survey Methods: Introduction. *Public Opinion Quarterly*, 72(5), 831–835. doi:10.1093/poq/nfn066
- Cousins, M. (2005). *European Welfare States : Comparative Perspectives*.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). SAGE Publications Inc.
- Creswell, J. W., & Clark, V. L. P. (2011). *Designing and Conducting Mixed Methods Research*. SAGE Publications Inc.
- Cull, M., & Whitton, D. (2011). University students' financial literacy levels: Obstacles and aids. *The Economic and Labour Relations Review*. doi:10.1177/103530461102200106
- Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, 1(1), 16–29. doi:10.1037/1082-989X.1.1.16
- Curto, V., Lusardi, A., & Mitchell, O. (2009). *Financial literacy among the young: Evidence and implications for consumer policy* (No. 15352). Retrieved from <http://www.nber.org/papers/w15352>
- Curto, V., Lusardi, A., Mitchell, O. S., & Curto, V. (2009). Financial literacy among the young : Evidence and implications for consumer policy. *Literacy*, (Working paper 2009-09), 1–35. doi:10.2139/ssrn.1476982
- Danes, S. M., & Yang, Y. (2014). Assessment of the Use of Theories within the Journal of Financial Counseling and Planning and the Contribution of the Family Financial Socialization Conceptual Model. *Journal of Financial Counseling and Planning*, 25(1). Retrieved from <http://papers.ssrn.com/abstract=2466560>

- De Bassa Scheresberg, C. (2013). Financial literacy and financial behavior among young adults: Evidence and implications. *Numeracy*, 6(2). doi:10.5038/1936-4660.6.2.5
- Deaton, A. (1989). Saving in developing countries: Theory and review. In *Proceedings of the World Bank Annual Conference on Development Economics* (pp. 61–108). Retrieved from http://www.princeton.edu/rpds/papers/Deaton_Saving_in_Developing_Countries_WBER1989.pdf
- Deaton, A. S. (2005). Franco Modigliani and the life cycle theory of consumption. *Quarterly Review*, (233), 91–108. doi:10.2139/ssrn.686475
- Deidda, M. (2013). Precautionary saving, financial risk, and portfolio choice. *Review of Income and Wealth*, 59(1), 133–156. doi:10.1111/roiw.12001
- Department of statistic Malaysia. (2010). Population distribution and basic demographic characteristic report 2010. Retrieved from http://www.statistics.gov.my/portal/index.php?option=com_content&view=article&id=1215
- DeVaney, S. A. (1995). Emergency fund adequacy among US households in 1977 and 1989. *Consumer Interests Annual*, 41, 222–223.
- Dilworth, J. L., Chenoweth, L. C., & Engelbrecht, J. (2000). A qualitative study of the money goals of college students and their parents. *Financial Counseling and Planning*, 11(2), 33–42.
- Drentea, P., & Lavrakas, P. J. (2000). Over the limit: The association among health, race and debt. *Social Science & Medicine*, 50(4), 517–529. doi:[http://dx.doi.org/10.1016/S0277-9536\(99\)00298-1](http://dx.doi.org/10.1016/S0277-9536(99)00298-1)
- Dynan, K., Skinner, J., & Zeldes, S. (2004). *Do the rich save more?* *Journal of Political Economy* (Vol. 112). Cambridge, MA. doi:10.3386/w7906
- East, R. (1993). Investment decisions and the theory of planned behaviour. *Journal of Economic Psychology*, 14(2), 337–375. doi:10.1016/0167-4870(93)90006-7
- Elmerick, S., Montalto, C., & Fox, J. (2002). Use of financial planners by US households. *Financial Services Review*, 11(3), 217–232. Retrieved from http://www2.stetson.edu/fsr/abstracts/vol_11_num3_p217.pdf
- Erskine, M., Kier, C., Leung, A., & Sproule, R. (2006). Peer crowds, work experience, and financial saving behaviour of young Canadians. *Journal of Economic Psychology*, 27(2), 262–284. doi:10.1016/j.joep.2005.05.005
- Esping-Andersen, G. (1997). Hybrid or unique?: The Japanese welfare state between Europe and America. *Journal of European Social Policy*, 7(3), 179–189. doi:doi:10.1177/095892879700700301

- Evans, J. R., & Mathur, A. (2005). The value of online surveys. *Internet Research*, 15(2), 195–219. doi:10.1108/10662240510590360
- Falahati L A Paim, L. H. J. B., Falahati, L., & Paim, L. (2011). Gender differences in financial well-being among college students. *Australian Journal of Basic and Applied Sciences*, 5(9), 1765–1776.
- Fernando, J. (2006). The position of Islam in the constitution of Malaysia. *Journal of Southeast Asian Studies*, 37(2), 249–266.
doi:http://dx.doi.org/10.1017/S0022463406000543
- Ferragina, E., Seeleib-Kaiser, M., & Tomlinson, M. (2013). Unemployment Protection and Family Policy at the Turn of the 21st Century: A Dynamic Approach to Welfare Regime Theory. *Social Policy & Administration*, 47(7), 783–805.
doi:10.1111/j.1467-9515.2012.00855.x
- Fessler, P., Schürz, M., Wagner, K., & Weber, B. (2007). Financial capability of Austrian households. *Monetary Policy & the Economy*, 3, 50–67.
doi:DOI:10.5243/jsswr.2010.13
- Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics* (4th ed.). SAGE Publications Ltd; Fourth Edition edition.
- Finke, M., Huston, S., & Winchester, D. (2011). Financial advice: Who pays. *Journal of Financial Counseling and Planning*, 22(1), 18–26.
- Finnane, A. (1996). What should Chinese women wear?: A national problem. *Modern China*, 22(2), 99–131. Retrieved from <http://www.jstor.org/stable/10.2307/189339>
- Fisher, P., & Anong, S. (2012). Relationship of saving motives to saving habits. *Journal of Financial Counseling and Planning*, 23, 63–79. Retrieved from https://www.afcpe.org/assets/pdf/v23_j4.pdf
- Fisher, P. J. (2010). Income uncertainty and household saving in the United States. *Family and Consumer Sciences Research Journal*, 39(1), 57–74.
doi:10.1111/j.1552-3934.2010.02045.x
- Fisher, P. J., & Hsu, C. (2012). Differences in household saving between non-Hispanic White and Hispanic Households. *Hispanic Journal of Behavioral Sciences*, 34(1), 137–159. doi:10.1177/0739986311428891
- Fisher, P. J., & Montalto, C. P. (2010). Effect of saving motives and horizon on saving behaviors. *Journal of Economic Psychology*, 31(1), 92–105.
doi:10.1016/j.joep.2009.11.002
- FLEC. (2012). *Research Priorities and Research Questions Financial Literacy and Education Commission Research & Evaluation Working Group*. United States. Retrieved from [http://www.treasury.gov/resource-center/financial-education/Documents/2012 Research Priorities - May 12.pdf](http://www.treasury.gov/resource-center/financial-education/Documents/2012%20Research%20Priorities%20-%20May%2012.pdf)

- FPA®. (n.d.-a). Standard of care. Retrieved from <http://www.fpanet.org/professionals/AboutFPA/Organization/StandardofCare/>
- FPA®. (n.d.-b). What is financial planning? Retrieved from <http://www.fpanet.org/WhatisFinancialPlanning/>
- Frasca, R. (2008). *Personal finance: an integrated planning approach, student value edition*. Prentice Hall.
- Friedline, T., Elliott, W., & Chowa, G. A. N. (2013). Testing an asset-building approach for young people: Early access to savings predicts later savings. *Economics of Education Review*, 33, 31–51. doi:10.1016/j.econedurev.2012.10.004
- Friedline, T. L., Elliott, W., & Nam, I. (2011). Predicting savings from adolescence to young adulthood: A propensity score approach. *Journal of the Society for Social Work and Research*, 2(1), 1–22. doi:DOI:10.5243/jsswr.2010.13
- Friedman. (1957). *A theory of the consumption function* (Princeton.). Princeton University Press. Retrieved from <http://papers.nber.org/books/frie57-1>
- Fünfgeld, B., & Wang, M. (2009). Attitudes and behaviour in everyday finance: evidence from Switzerland. *International Journal of Bank Marketing*, 27(2), 108–128. doi:10.1108/02652320910935607
- Furnham, A. (1985). Why do people save? Attitudes to, and habits of saving money in Britain. *Journal of Applied Social Psychology*, 15(5), 354–373. doi:10.1111/j.1559-1816.1985.tb00912.x
- Garcia, M. T. M., Barros, C., & Silvestre, A. (2011). Saving behaviour: evidence from Portugal. *International Review of Applied Economics*, 25(2), 225–238. doi:10.1080/02692171.2010.483467
- Gefen, D., Straub, D., & Boudreau, M. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the Association for Information Systems*, 4(1), 7.
- Gitman, L., Joehnk, M., & Billingsley, R. (2010). *Personal Financial Planning 12th* (12th ed.). USA: South-Western Cengage Learning.
- Gjertson, L. (2015). A Fragile Balance. In *Liquid Savings Patterns and Credit Usage among the Poor* (pp. 17–37).
- Gov.UK. (n.d.). Benefits in UK. Retrieved April 10, 2015, from <https://www.gov.uk/browse/benefits>
- Government, M. F. (2013). *Private Healthcare Facilities and Services (Private Hospitals and Other Private Healthcare Facilities) (Amendment) Order 2013*. Retrieved from [http://www.federalgazette.agc.gov.my/outputp/pua_20131216_P.U. %28A%29358 - PERINTAH KEMUDAHAN DAN JAGAAN KESIHATAN %28PINDAAN](http://www.federalgazette.agc.gov.my/outputp/pua_20131216_P.U.%28A%29358-PerintahKemudahanDanJagaanKesihatan%28Pindaan)

- Grable, J. E., Park, J.-Y., & Joo, S.-H. (2009). Explaining financial management behavior for Koreans living in the United States. *Journal of Consumer Affairs*, 43(1), 80–107. doi:10.1111/j.1745-6606.2008.01128.x
- Granello, D. H., & Wheaton, J. E. (2004). Online data collection: Strategies for research. *Journal of Counseling & Development*, 82(4), 387–393. doi:10.1002/j.1556-6678.2004.tb00325.x
- Greninger, S. A., Hampton, V. L., Kitt, K. A., & Achacoso, J. A. (1996). Ratios and benchmarks for measuring the financial well-being of families and individuals. *Financial Services Review*, 5(1), 57–70. doi:http://dx.doi.org/10.1016/S1057-0810(96)90027-X
- Guiso, L., Jappelli, T., & Terlizzese, D. (1992). Earnings uncertainty and precautionary saving. *Journal of Monetary Economics*, 30(2), 307–337. doi:10.1016/0304-3932(92)90064-9
- Gutter, M. S., Garrison, S., & Copur, Z. (2010). Social learning opportunities and the financial behaviors of college students. *Family and Consumer Sciences Research Journal*, 38(4), 387–404. doi:10.1111/j.1552-3934.2010.00034.x
- Haan, P., & Prowse, V. L. (2015). Optimal social assistance and unemployment insurance in a life-cycle model of family labor supply and savings. *SSRN Electronic Journal*. doi:10.2139/ssrn.2585531
- Hair, J. ., Black, W. ., Babin, B. ., Anderson, R. ., C.Black, W., & J.Babin, B. (2013). *Multivariate Data Analysis* (7th ed.). Englewood Cliffs, NJ: Pearson Education Limited.
- Hanna, S. (2011). The demand for financial planning services. *Journal of Personal Finance*, 10(1), 36–62. Retrieved from [http://www.academyfinancial.org/10Conference/10Proceedings/\(4C\)Hanna.pdf](http://www.academyfinancial.org/10Conference/10Proceedings/(4C)Hanna.pdf)
- Hanna, S. D., & Lindamood, S. (2010). Quantifying the economic benefits of personal financial planning. *Financial Services Review*, 19(2), 111–127.
- Hanna, S., & Wang, H. (1995). The adequacy of emergency funds to cover household expenditures. *Consumer Interests Annual*, 41, 224–225.
- Haron, S., Ahmad, N., & Planisek, S. L. (1994). Bank patronage factors of Muslim and Non-Muslim customers. *International Journal of Bank Marketing*, 12(1), 32–40. doi:10.1108/02652329410049599
- Haron, S. N., Hamida, M. Y., & Talib, A. (2012). Towards healthcare service quality: An understanding of the usability concept in healthcare design. *Procedia - Social and Behavioral Sciences*, 42, 63–73. doi:10.1016/j.sbspro.2012.04.167
- Haron, S., Sharpe, D., Abdel-Ghany, M., & Masud, J. (2012). Moving up the savings

- hierarchy: examining savings motives of older Malay muslim. *Journal of Family and Economic Issues*. doi:<http://dx.doi.org/10.1007/s10834-012-9333-0>
- Harrison, D. (2004). *Personal Financial Planning: Theory and Practice* (1st ed.). Prentice Hall.
- Hassali, M. A., Alrasheedy, A. A., Ab Razak, B. A., Al-Tamimi, S. K., Saleem, F., Ul Haq, N., & Aljadhey, H. (2014). Assessment of general public satisfaction with public healthcare services in Kedah, Malaysia. *The Australasian Medical Journal*, 7(1), 35–44. doi:10.4066/AMJ.2014.1936
- Hatcher, C. B. (2000). Should households establish emergency funds. *Financial Counseling and Planning*, 11(2), 77–83.
- Heckathorn, D. (1997). Respondent-driven sampling: a new approach to the study of hidden populations. *Social Problems*, 44(2), 174–199.
- Heckman, S., Lim, H., & Montalto, C. (2014). Factors related to financial stress among college students. *Journal of Financial Therapy*, 5(1), 3. Retrieved from <http://newprairiepress.org/jft/vol5/iss1/3/>
- Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. (2003). Household financial management: the connection between knowledge and behavior. *Federal Reserve Bulletin*, 89(7), 7. Retrieved from <http://heinonline.org/HOL/Page?handle=hein.journals/fedred89&id=791&div=&collection=journals>
- Hinkin, T. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods*, 1(1), 104–121. doi:10.1177/109442819800100106
- Hira, T. K. (1997). Financial attitudes, beliefs and behaviours: differences by age. *Journal of Consumer Studies & Home Economics*, 21(3), 271–290. doi:10.1111/j.1470-6431.1997.tb00288.x
- Hira, T. K. (2012). Promoting sustainable financial behaviour: implications for education and research. *International Journal of Consumer Studies*, 36(5), 502–507. doi:10.1111/j.1470-6431.2012.01115.x
- Hong, G., & Kao, Y. (1997). Emergency fund adequacy of Asian Americans. *Journal of Family and Economic Issues*, 18(2), 127–145.
- Hong, G., Sung, J., & Kim, S. (2002). Saving behavior among Korean households. *Family and Consumer Sciences Research Journal*, 30(4), 437–462. doi:10.1177/1077727X02030004002
- Horioka, C. Y., & Watanabe, W. W. (1997). Why do people save? A micro-analysis of motives for household saving in Japan. *The Economic Journal*, 107(442), 537–552. doi:10.1111/j.1468-0297.1997.tb00026.x

- Huston, S. J. (2010). Measuring financial literacy. *Journal of Consumer Affairs*, 44(2), 296–316. doi:10.1111/j.1745-6606.2010.01170.x
- Huston, S. J. (2012). Financial literacy and the cost of borrowing. *International Journal of Consumer Studies*, 36(5), 566–572. doi:10.1111/j.1470-6431.2012.01122.x
- Huston, S. J., & Chang, Y. R. (1997). Adequate emergency fund holdings and household type. *Financial Counseling and Planning*, 8(1), 37–46.
- Iacobucci, D. (2010). Structural equations modeling: Fit indices, sample size, and advanced topics. *Journal of Consumer Psychology*, 20(1), 90–98. doi:10.1016/j.jcps.2009.09.003
- IPPBM. (2011). Malaysian Youth Index (MYI) Domain. Retrieved from <http://www.ippbm.gov.my/v3-en/index.php/component/content/article.html?id=259>
- Ismail, A. G., & Ahmad, N. Z. (1997). Pawnshop as an instrument of microenterprise credit in Malaysia. *International Journal of Social Economics*, 24(11), 1343–1352. doi:10.1108/03068299710193633
- Jackson, K. M., & Trochim, W. M. K. (2002). Concept mapping as an alternative approach for the analysis of open-ended survey responses. *Organizational Research Methods*, 5(4), 307–336. doi:10.1177/109442802237114
- Jaffe, J. F. (1989). Gold and gold stocks as investments for institutional portfolios. *Financial Analysts Journal*, 45(2), 53–59.
- Jariah, M., Husniyah, A. R., Laily, P., & Britt, S. (2004). Financial behavior and problems among university students: need for financial education. *Journal of Personal Finance*, 3(1), 82–96.
- Jean, M. (2005). Emergency Fund Essentials. *The Journal of Consumer Education*, 22, 27–34.
- Jian Xiao, J., & Yao, R. (2014). Consumer debt delinquency by family lifecycle categories. *International Journal of Bank Marketing*, 32(1), 43–59. doi:10.1108/IJBM-02-2013-0007
- Johnson, D., & Widdows, R. (1985). Emergency fund levels of households. In *The Proceedings of the American Council on Consumer Interests 31th Annual Conference* (pp. 235–241).
- Joo, S.-H., & Grable, J. E. (2006). Using predicted perceived emergency fund adequacy to segment prospective financial consulting clients. *Financial Services Review*, 15(4), 297–313.
- Jo-Pei, T., Buharuddin, R., Juhari, R., & Krauss, S. E. (2008). Socio-demographic characteristics of intercultural marriage: A study of a multi-ethnic community in Malaysia. *European Journal of Social Sciences*, 5(4), 30 – 44.

- Jorgensen, B. L., & Savla, J. (2010). Financial literacy of young adults: the importance of parental socialization. *Family Relations*, 59(4), 465–478. doi:10.1111/j.1741-3729.2010.00616.x
- Jupp, V. (2006). *The SAGE Dictionary of Social Research Methods*. Sage Publications, inc. Retrieved June 23, 2014, from <http://web.b.ebscohost.com/ehost/ebookviewer/ebook/bmxlYmtfXzI1MTQ5OF9fQU41?sid=bef9e1b2-0f3a-40fb-a01f-7f1faa1766ee@sessionmgr198&vid=1&format=EB&rid=1>
- Kabaci, M. J., & Cude, B. J. (2015). A Delphi study to identify personal finance core concepts and competencies of first-generation college students. *Family and Consumer Sciences Research Journal*, 43(3), 244–258. doi:10.1111/fcsr.12100
- Kameel, A., Meera, M., & Larbani, M. (2006). Seigniorage of fiat money and the Maqasid al-Shari'ah: The compatibility of the gold dinar with the Maqasid. *Humanomics*, 22(2), 84–97. doi:http://dx.doi.org/10.1108/08288660610669383
- Kennickell, A. B., Starr-mccluer, M., & Sundén, A. E. (1997). Saving and financial planning : Some findings from a focus group. *Jornal of Financial Counselling and Planning Education*, 1–8.
- Keynes, J. (1937). The general theory of employment. *The Quarterly Journal of Economics*, 51(2), 209–223. Retrieved from <http://www.jstor.org/stable/1882087>
- Kimball, M., & Weil, P. (2009). Precautionary saving and consumption smoothing across time and possibilities. *Journal of Money, Credit and Banking*, 41(2-3), 245–284. doi:10.1111/j.1538-4616.2009.00205.x
- Kline, R. B. (2011). *Principles and Practice of Structural Equation Modeling*. Guilford Press.
- Kostakis, I. (2013). The determinants of householdss savings during recession: Evidence from Greece. *SSRN Electronic Journal*. doi:10.2139/ssrn.2323559
- Kumar, R. (2010). *Research Methodology: A Step-by-Step Guide for Beginners* (3rd ed.). London: SAGE Publications Ltd.
- LeCompte, M. D., & Schensul, J. J. (1999). *Designing and conducting ethnographic research* (1st ed.). AltaMira Press.
- Lee, J.-J., & Sawada, Y. (2010). Precautionary saving under liquidity constraints: Evidence from rural Pakistan. *Journal of Development Economics*, 91(1), 77–86. doi:http://dx.doi.org/10.1016/j.jdeveco.2009.05.001
- Lim, C. (2011). The analysis of psychological factors affecting savers in Malaysia. *Middle Eastern Finance and Economic*, (12), 79–85. Retrieved from <http://eprints.utar.edu.my/884/1/6446.pdf>
- Lindqvist, A. (1981). A note on determinants of household saving behavior. *Journal of*

- Economic Psychology*, 1(1), 39–57. doi:10.1016/0167-4870(81)90004-0
- Loke, V., Choi, L., & Libby, M. (2015). Increasing youth financial capability: An evaluation of the MyPath Savings initiative. *Journal of Consumer Affairs*, 49(1), 97–126. doi:10.1111/joca.12066
- Lowry, P. B., & Gaskin, J. (2014). Partial Least Squares (PLS) Structural Equation Modeling (SEM) for Building and Testing Behavioral Causal Theory: When to Choose It and How to Use It. *IEEE Transactions on Professional Communication*, 57(2), 123–146. doi:10.1109/TPC.2014.2312452
- Lunt, P. K., & Livingstone, S. M. (1991). Psychological, social and economic determinants of saving: Comparing recurrent and total savings. *Journal of Economic Psychology*, 12(4), 621–641. doi:10.1016/0167-4870(91)90003-C
- Lusardi, A. (2000). Precautionary saving and the accumulation of wealth. *JCPR Working Paper*, No 204.
- Lusardi, A. (2008). *Financial literacy: An essential tool for informed consumer choice? CFS Working Paper*. Dartmouth College. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1149331
- Lusardi, A., Mitchell, O., & Curto, V. (2010). Financial literacy among the young. *Journal of Consumer Affairs*, 44(2), 358–380. doi:<http://dx.doi.org/10.1111/j.1745-6606.2010.01173.x>
- Lynch, J., John, G., Netemeyer, R. G., Spiller, S. A., & Zammit, A. (2010). A generalizable scale of propensity to plan: The long and the short of planning for time and for money. *Journal of Consumer Research*, 37(1), 108–128. doi:10.1086/649907
- M. Byrne, B. (2010). *Structural Equation Modeling With AMOS. Structural Equation Modeling* (2 nd.). New York: Routledge.
- MacCallum, R., Widaman, K., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. *Psychological Method*, 4(1), 84–99. doi:<http://dx.doi.org/10.1037/1082-989X.4.1.84>
- Madura, J. (2006). *Personal finance with financial planning software* (3rd rev.). Boston: Addison-Wesley Educational Publishers Inc., U.S.
- Malaysia, M. of H. (2013). Frequently Asked Questions. Retrieved from <http://www.moh.gov.my/english.php/pages/view/160>
- Malaysia, M. of higher education. (2016). *Indikator Pengajian Tinggi Malaysia 2013*.
- Manaf, N. H. A. (2012). Inpatient satisfaction: an analysis of Malaysian public hospitals. *International Journal of Public Sector Management*, 25(1), 6–16. doi:10.1108/09513551211200258

- Manaf, N. H. A., & Nooi, P. S. (2009). Patient satisfaction as an indicator of service quality in Malaysian public hospitals. *Asian Journal on Quality*, 10(1), 77–87. doi:10.1108/15982680980000628
- Mansor, N., A. Bashir Ahmad, S., Abu Bakar, S., & Ismail, I. (2013). A demographic analysis on customer acceptance towards Islamic pawn broking in Malaysia. *Asian Social Science*, 10(2), p27. doi:10.5539/ass.v10n2p27
- Marks, L., Dollahite, D., & Dew, J. (2009). Enhancing cultural competence in financial counseling and planning: Understanding why families make religious contributions. *Journal of Financial Counseling and Planning Education*, 20(2), 14–26.
- Marsden, M., Zick, C. D., & Mayer, R. N. (2011). The value of seeking financial advice. *Journal of Family and Economic Issues*, 32(4), 625–643. doi:http://dx.doi.org/10.1007/s10834-011-9258-z
- Martin, A., & Oliva, J. (2001). Teaching children about money: Applications of social learning and cognitive learning developmental theories. *Journal of Family and Consumer Sciences: From Research to Practice*, 93(2), 26–29.
- Matsunaga, M. (2011). How to factor-analyze your data right : Do's , don'ts , and how-to' s. *International Journal of Psychological Research*, 3(1), 97–110.
- McCormick, M. (2009). The effectiveness of youth financial education: A review of the literature. *Journal of Financial Counseling and Planning Volume*, 20(1), 70–83.
- Meho, L. I. (2006). E-mail interviewing in qualitative research: A methodological discussion. *Journal of the American Society for Information Science and Technology*, 57(10), 1284–1295. doi:DOI: 10.1002/asi.20416
- Milan, V. (2004). *Income support for the unemployed: Issues and options*. Washington, DC: World Bank Publications.
- Miller, M. (1986). Behavioral rationality in finance: The case of dividends. *Journal of Business*, 59(4), S451–S468. doi:10.2307/2352774
- Ministry of Human resource, M. (2012). National Wages Consultative Council Act. Retrieved from <http://mohreng.blogspot.com/>
- Ministry of Human resource, M. (2013a). Implementation of Minimum Retirement Age for Private Sector. Retrieved from <http://www.mohr.gov.my/index.php/en/minimum-retirement-age-for-private-sector/430-implementation-of-minimum-retirement-age-for-private-sector>
- Ministry of Human resource, M. (2013b). Minimum Wages Order 2012. Retrieved from <http://www.mohr.gov.my/pdf/minimumwagesorder2012.pdf>
- Mishra, A. K., Uematsu, H., & Powell, R. R. (2012). Precautionary wealth and income uncertainty: A household-level analysis. *Journal of Applied Economics*, 15(2),

353–369. doi:[http://dx.doi.org/10.1016/S1514-0326\(12\)60015-4](http://dx.doi.org/10.1016/S1514-0326(12)60015-4)

- Modigliani, F., & Brumberg, R. (1954). Utility analysis and the consumption function: An interpretation of cross-section data. In *PostKeynesian Economics* (Vol. 388, pp. 388–436).
- Montalto, C. (2002). A comprehensive look at emergency funds. Retrieved from http://etd.ohiolink.edu/send-pdf.cgi/Bi_Lan.pdf?osu1175700962&dl=y
- Mountain, T., & Hanna, S. (2012). Negative net worth and the life cycle hypothesis. *Financial Counseling and Planning*, 7(1), 87–96.
- Munn, P., & Drever, E. (1990). *Using Questionnaires in Small-Scale Research. A Teachers' Guide*. Scottish Council for Research in Education. Scottish Council for Research in Education, 15 St. John Street, Edinburgh, EH8 8JR, Scotland, United Kingdom. Retrieved from <http://files.eric.ed.gov/fulltext/ED326488.pdf>
- Nagaraj, S. (2009). Intermarriage in Malaysia. *Malaysian Journal of Economic Studies*, 46(1), 75–92.
- Norhana, E., & Hua, T. G. (2009). Household debt in Malaysia. In *BIS Papers chapters* (Vol. 46, pp. 107–116). Bank for International Settlements. Retrieved from <http://ideas.repec.org/h/bis/bisbpc/46-12.html>
- Norvilitis, J. M., Merwin, M. M., Osberg, T. M., Roehling, P. V., Young, P., & Kamas, M. M. (2006). Personality factors, money attitudes, financial knowledge, and credit-card debt in college students. *Journal of Applied Social Psychology*, 36(6), 1395–1413. doi:10.1111/j.0021-9029.2006.00065.x
- Norvilitis, J. M., Szablicki, P. B., & Wilson, S. D. (2003). Factors influencing levels of credit-card debt in college students1. *Journal of Applied Social Psychology*, 33(5), 935–947. doi:10.1111/j.1559-1816.2003.tb01932.x
- Nyhus, E. K., & Webley, P. (2001). The role of personality in household saving and borrowing behaviour. *European Journal of Personality*, 15(S1), S85–S103. doi:<http://doi.wiley.com/10.1002/per.422>
- Okech, D., Mimura, Y., Mauldin, T., & Kim, J. (2013). The influence of financial factors on motivation to save among Poor individuals. *Journal of Policy Practice*, 12(2), 107–124. doi:10.1080/15588742.2013.766917
- Onwuegbuzie, A., & Johnson, R. (2006). The validity issue in mixed research. *Research in the Schools*, 13(1), 48–63.
- Oppenheim, A. N. (1998). *Questionnaire Design, Interviewing and Attitude Measurement* (2nd ed.). London: Printer Publisers Ltd.
- Ottaviani, C., & Vandone, D. (2011). Impulsivity and household indebtedness: Evidence from real life. *Journal of Economic Psychology*, 32(5), 754–761. doi:10.1016/j.joep.2011.05.002

- Pallant, J. (2013). *SPSS survival manual: A step by step guide to data analysis using SPSS* (4th ed.). Open University Press.
- Pope, R., & Howe, T. (1991). Characteristics and needs of students interested in financial planning. *Financial Counseling and Planning*, 17(1), 79–96.
- Preacher, K., & MacCallum, R. (2002). Exploratory factor analysis in behavior genetics research: Factor recovery with small sample sizes. *Behavior Genetics*, 32(2), 153–161.
- Rabinovich, A., & Webley, P. (2007). Filling the gap between planning and doing: Psychological factors involved in the successful implementation of saving intention. *Journal of Economic Psychology*, 28(4), 444–461.
doi:10.1016/j.joep.2006.09.002
- Rahim, H., Jusoh, Z., & Samad, M. (2012). Predictors of investment in risky assets among Malaysian families. *Jurnal Ekonomi Malaysia*, 46(1), 27–37.
- Reddy, R. (1995). Marriage and divorce regulation and recognition in Malaysia. *Family Law Quarterly*, 29(3), 613–625.
- Redhead, K. (2008). *Personal finance and investments: A behavioural finance perspective* (1st ed.). New York, NY: Routledge.
- Remund, D. L. (2010). Financial literacy explicated : the case for a clearer definition in an increasingly complex economy. *Journal of Consumer Affairs*, 44(2), 276–295.
doi:10.1111/j.1745-6606.2010.01169.x
- Ricciardi, V., & Simon, H. (2000). What is behavioral finance? *Business, Education & Technology Journal*, 2(2), 1–9.
- Ritter, J. R. (2003). Behavioral finance. *Pacific-Basin Finance Journal*, 11(4), 429–437.
doi:10.1016/S0927-538X(03)00048-9
- Rodriguez-Flores, A., & DeVaney, S. A. (2007). The effect of employment status on households' emergency funds. *Journal of Personal Finance*, 5(4), 67–84.
- Rutherford, L., & DeVaney, S. (2009). Utilizing the theory of planned behavior to understand convenience use of credit cards. *Journal of Financial Counseling and Planning*, 20(2), 48–63.
- Rutherford, L. G., & Fox, W. S. (2010). Financial wellness of young adults age 18-30. *Family and Consumer Sciences Research Journal*, 38(4), 468–484.
doi:10.1007/978-0-387-75734-6_2
- Ryan, G. W., & Bernard, H. R. (2003). Techniques to identify themes. *Field Methods*, 15(1), 85–109. doi:10.1177/1525822X02239569
- Sarantakos, S. (2013). *Social Research*. Palgrave Macmillan.

- Sauermann, H., & Roach, M. (2013). Increasing web survey response rates in innovation research: An experimental study of static and dynamic contact design features. *Research Policy*, 42(1), 273–286. doi:10.1016/j.respol.2012.05.003
- Schuchardt, J., Hanna, S., Hira, T., Lyons, A. C., Palmer, L., & Xiao, J. J. (2009). Financial literacy and education research priorities. *Journal of Financial Counseling and Planning*, 20(1), 85–95.
- Serido, J., Shim, S., Mishra, A., & Tang, C. (2010). Financial parenting, financial coping behaviors, and well-being of emerging adults. *Family Relations*, 59(4), 453–464. doi:10.1111/j.1741-3729.2010.00615.x
- Serido, J., Shim, S., & Tang, C. (2013). A developmental model of financial capability: A framework for promoting a successful transition to adulthood. *International Journal of Behavioral Development*, 37(4), 287–297. doi:10.1177/0165025413479476
- Sherman, E. (1982). Gold: A conservative, prudent diversifier. *The Journal of Portfolio Management*, 8(3), 21–27. doi:http://dx.doi.org/10.3905/jpm.1982.408850
- Sherraden, M., Peters, C., Wagner, K., Guo, B., & Clancy, M. (2013). Contributions of qualitative research to understanding savings for children and youth. *Economics of Education Review*, 32(0), 66–77. doi:http://dx.doi.org/10.1016/j.econedurev.2012.09.006
- Shiller, R. J. (2006). Tools for financial innovation: Neoclassical versus behavioral finance. *Financial Review*, 41(1), 1–8. doi:10.1111/j.1540-6288.2006.00129.x
- Shim, S., Barber, B. L., Card, N. A., Xiao, J. J., & Serido, J. (2010). Financial socialization of first-year college students: The roles of parents, work, and education. *Journal of Youth and Adolescence*, 39(12), 1457–70. doi:http://dx.doi.org/10.1007/s10964-009-9432-x
- Shim, S., Serido, J., & Tang, C. (2012). The ant and the grasshopper revisited: The present psychological benefits of saving and future oriented financial behaviors. *Journal of Economic Psychology*, 33(1), 155–165. doi:10.1016/j.joep.2011.08.005
- Shim, S., Xiao, J. J., Barber, B. L., & Lyons, A. C. (2009). Pathways to life success: A conceptual model of financial well-being for young adults. *Journal of Applied Developmental Psychology*, 30(6), 708–723. doi:10.1016/j.appdev.2009.02.003
- Shleifer, A., & Vishny, R. W. (1997). The limits of arbitrage. *The Journal of Finance*, 52(1), 35–55. doi:10.1111/j.1540-6261.1997.tb03807.x
- Sideridis, G., Simos, P., Papanicolaou, A., & Fletcher, J. (2014). Using structural equation modeling to assess functional connectivity in the brain: Power and sample size considerations. *Educational and Psychological Measurement*, 0013164414525397–. doi:10.1177/0013164414525397
- Silverman, D. (2006). *Interpreting qualitative data: Methods for analyzing talk, text*

- and interaction (3rd ed.). London: SAGE Publications.
- Singh, R. (2010). Behavioural finance studies: Emergence and developments. *Journal of Contemporary Management Research*, 4(2), 1–9.
- Skinner, J. (1988). Risky income, life cycle consumption, and precautionary savings. *Journal of Monetary Economics*, 22(2), 237–255.
doi:[http://dx.doi.org/10.1016/0304-3932\(88\)90021-9](http://dx.doi.org/10.1016/0304-3932(88)90021-9)
- Snyder, D. (1974). Econometric studies of household saving behaviour in developing countries: A survey. *The Journal of Development Studies*, 10(2), 139–153.
Retrieved from <http://www.tandfonline.com/doi/abs/10.1080/00220387408421481>
- Steckler, A., McLeroy, K., & Goodman, R. (1992). Toward integrating qualitative and quantitative methods: an introduction. *Health Education & Behavior*, 19(1), 1–8.
doi:10.1177/109019819201900101
- StepChange Debt Charity. (n.d.). How we can help you. Retrieved from <http://www.stepchange.org/Howwecanhelpyou.aspx>
- Stevens, J. (2009). *Applied Multivariate Statistics for the Social Sciences* (5th ed.). Routledge.
- Talib, R. (2000). Malaysia: Power shifts and the matrix of consumption. In *Consumption in Asia: Lifestyles and identities* (pp. 35–60). London: Routledge.
- Tobin, J. (1967). Life cycle saving and balanced growth. *Ten Economic Studies in the Tradition of Irving Fisher*. New York: Wiley, 231–256. Retrieved from <http://dido.wss.yale.edu/P/cp/p02b/p0272.pdf>
- Turesson, J., & Yu, S. (2011). *Student saving, does it exist?: A study of students' saving behavior, attitude towards saving and motivation to save*. Umeå University.
Retrieved from <http://umu.diva-portal.org/smash/record.jsf?pid=diva2:426372>
- Van Schie, R. J. G., Donkers, B., & Dellaert, B. G. C. (2012). Savings adequacy uncertainty: Driver or obstacle to increased pension contributions? *Journal of Economic Psychology*, 33(4), 882–896. doi:10.1016/j.joep.2012.04.004
- Van Selm, M., & Jankowski, N. W. (2006). Conducting online surveys. *Quality and Quantity*, 40(3), 435–456. doi:10.1007/s11135-005-8081-8
- Vaus, D. De. (2001). *Research Design in Social Research*. SAGE Publications.
- Volpe, R., Chen, H., & Pavlicko, J. (1996). Personal investment literacy among college students: A survey. *Financial Practice and Education*, 6(2), 86–94.
- Wärneryd, K.-E. K. (1999). On the psychology of saving: An essay on economic behavior. *Journal of Economic Psychology*, 10(4), 515–541. doi:10.1016/0167-4870(89)90041-X

- Warschauer, T. (2002). The role of universities in the development of the personal financial planning profession. *Financial Services Review*, 11(3), 201.
- Watchravesringkan, K. (2008). Financial behavior of Hispanic Americans. *Handbook of Consumer Finance Research*, pp 271–285. doi:http://dx.doi.org/10.1007/978-0-387-75734-6_16
- Webley, P., & Nyhus, E. K. (2013). Economic socialization, saving and assets in European young adults. *Economics of Education Review*, 33, 19–30. doi:10.1016/j.econedurev.2012.09.001
- Wheeler-Brooks, J., & Scanlon, E. (2009). Perceived facilitators and barriers to saving among low-income youth. *The Journal of Socio-Economics*, 38(5), 757–763. doi:10.1016/j.socec.2009.03.015
- Wiley, J. B., Han, V., Albaum, G., & Thirkell, P. (2009). Selecting techniques for use in an internet survey. *Asia Pacific Journal of Marketing and Logistics*, 21(4), 455–474. doi:10.1108/13555850910997535
- Williams, B., Brown, T., & Onsman, A. (2012). Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Paramedicine*, 8(3), 1. Retrieved from <http://ro.ecu.edu.au/jephc/vol8/iss3/1/>
- Wolf, E. J., Harrington, K. M., Clark, S. L., & Miller, M. W. (2013). Sample size requirements for structural equation models: An evaluation of power, bias, and solution propriety. *Educational and Psychological Measurement*, 73(6), 913–934. doi:10.1177/0013164413495237
- Wolff, E. N. (1981). The accumulation of household wealth over the life-cycle: A microdata analysis. *Review of Income and Wealth*, 27(1), 75–96. doi:10.1111/j.1475-4991.1981.tb00193.x
- Worthington, A. (2005). A note on households' choice of emergency finance. *Economics Bulletin*, 4(5), 1–7. Retrieved from <http://eprints.qut.edu.au/1679/>
- Worthington, A. C. (2004). Emergency funds in Australian households: An empirical analysis of capacity and sources. *Financial Counseling and Planning*, 15(1), 21–30.
- Worthy, S. L., Jonkman, J., & Blinn-Pike, L. (2010). Sensation-Seeking, Risk-Taking, and Problematic Financial Behaviors of College Students. *Journal of Family and Economic Issues*, 31(2), 161–170. doi:10.1007/s10834-010-9183-6
- Wright, K. B. (2005). Researching internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication*, 10(3), 00. doi:10.1111/j.1083-6101.2005.tb00259.x
- Xiao, J. (1996). Effects of family income and life cycle stages on financial asset ownership. *Financial Counseling and Planning*, 7(1), 21–30. Retrieved from

<http://www.afcpe.org/assets/pdf/vol-73.pdf>

- Xiao, J., & Fan, J. (2002). A comparison of saving motives of urban Chinese and American workers. *Family and Consumer Sciences Research Journal*, 30(4), 463–495.
- Xiao, J. J. (2008). Applying behavior theories to financial behavior. In *Handbook of Consumer Finance Research* (pp. 69–81). Retrieved from http://dx.doi.org/10.1007/978-0-387-75734-6_5
- Xiao, J. J. (2015). Consumer economic wellbeing. In *International Series on Consumer Science* (pp. 45–60). New York, NY: Springer New York. doi:10.1007/978-1-4939-2821-7
- Xiao, J. J., & Anderson, J. G. (1997). Hierarchical financial needs reflected by household financial asset shares. *Journal of Family and Economic Issues*, 18(4), 333–355. doi:10.1023/A:1024991304216
- Xiao, J. J., Ford, M. W., & Kim, J. (2011). Consumer financial behavior: An interdisciplinary review of selected theories and research. *Family and Consumer Sciences Research Journal*, 39(4), 399–414. doi:10.1111/j.1552-3934.2011.02078.x
- Xiao, J. J., O'Neill, B., Prochaska, J. M., Kerbel, C. M., Brennan, P., & Bristow, B. J. (2004). A consumer education programme based on the Transtheoretical Model of Change. *International Journal of Consumer Studies*, 28(1), 55–65. doi:10.1111/j.1470-6431.2004.00334.x
- Xiao, J. J., Sorhaindo, B., & Garman, E. T. (2006). Financial behaviours of consumers in credit counselling. *International Journal of Consumer Studies*, 30(2), 108–121. doi:10.1111/j.1470-6431.2005.00455.x
- Xiao, J. J., Tang, C., & Shim, S. (2009). Acting for happiness: financial behavior and life satisfaction of college students. *Social Indicators Research*, 92(1), 53–68. doi:<http://dx.doi.org/10.1007/s11205-008-9288-6>
- Xiao, J., & Noring, F. (1994). Perceived saving motives and hierarchical financial needs. *Financial Counseling and Planning*, 5(1), 25–44.
- Xiao, J., & Wu, J. (2006). Applying the theory of planned behavior to retain credit counseling clients. In *In Proceedings of the Association for Financial Counseling and Planning Education* (pp. 91–100). Retrieved from http://tcainstitute.org/working_papers/wp65xiaowu.pdf
- Yao, R., Wang, F., Weagley, R. O., & Liao, L. (2011). Household saving motives: Comparing American and Chinese consumers. *Family and Consumer Sciences Research Journal*, 40(1), 28–44. doi:10.1111/j.1552-3934.2011.02086.x
- Yao, R., Xiao, J. J., & Liao, L. (2014). Effects of age on saving motives of Chinese urban consumers. *Journal of Family and Economic Issues*. doi:10.1007/s10834-

- Yin-Fah, B., & Masud, J. (2010). Financial wellbeing of older peninsular Malaysians: A gender comparison. *Asian Social Science*, 6(3), 58–71.
- Zagorsky, J. L. (2012). Do people save or spend their inheritances? Understanding what happens to inherited wealth. *Journal of Family and Economic Issues*, 34(1), 64–76. doi:10.1007/s10834-012-9299-y
- Zhou, Y. (2003). Precautionary saving and earnings uncertainty in Japan: A household-level analysis. *Journal of the Japanese and International Economies*, 17(2), 192–212. doi:10.1016/S0889-1583(03)00012-1

APPENDIX

APPENDIX 1: QUESTIONNAIRE

SURVEY ON THE EMERGENCY FUND PROVISION AMONG YOUNG ADULTS IN MALAYSIA 2014



WELCOME

There may be several reasons for having a specific fund for future emergencies. To determine these reasons, internal and external factors need to be considered.

We would like your help to improve understanding about preparing for future emergency expenses among young adults in Malaysia. Your answers will contribute to the development of knowledge about personal financial planning area. We would greatly appreciate your answering all the questions, and we can assure you that your responses will be completely anonymous and will not be used for any other purpose. The questionnaire takes approximately 10 minutes to complete and if you are interested in taking part, please proceed to continue button. **By answering this questionnaire you are agreeing and volunteering to be a participant of this study.**

All data collected in this survey will be held anonymously and securely. No personal data are asked for or retained. Cookies and personal data stored by your Web browser are not used in this survey.

Note that once you have clicked on the CONTINUE button at the bottom of each page you cannot return to review or amend that page.

SECTION 1: Emergency Fund Formation Behaviour.

Please tick the appropriate answers.

- How could you explain your emergency financial needs (such as to cover medical needs, expenses if sudden unemployment, or any situation that requires immediate cash, etc.)?

Emergency expenses experience	Yes	No
1. I have previous experience of requiring emergency financial needs	<input type="checkbox"/>	<input type="checkbox"/>
2. I am currently facing emergency financial needs	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate your level of agreement with each of the following statements:

- Which financial activities that you perform currently **specifically** to fulfil your future emergency financial needs?

Financial instruments	Not At All.....Very Much	I am saving/investing.....for emergency purpose							
		Not at All	Every Month	Every 2 Months	Every 3 Months	Every 4 Months	Every 5 Months	Every 6 Months	No specific time
1. I make some savings	1 2 3 4 5 6 7 8 9 10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I invest in some financial instruments	1 2 3 4 5 6 7 8 9 10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 2: Emergency Fund Sources Preference Behaviour

Please indicate your level of agreement with each of the following statements by tick the appropriate scale:

1. Which of these financial instruments do you currently have that you specifically plan to be used in future to cover your expenses in case of emergency? (Such as to cover medical needs, expenses if sudden unemployment, or any situation that requires immediate cash, etc.)

Financial instruments	Yes	No
1. Current accounts	<input type="checkbox"/>	<input type="checkbox"/>
2. Savings accounts	<input type="checkbox"/>	<input type="checkbox"/>
3. Fixed deposits accounts	<input type="checkbox"/>	<input type="checkbox"/>
4. Money market accounts/ fund	<input type="checkbox"/>	<input type="checkbox"/>
5. Stocks	<input type="checkbox"/>	<input type="checkbox"/>

6. Bonds	<input type="checkbox"/>	<input type="checkbox"/>
7. Mutual funds	<input type="checkbox"/>	<input type="checkbox"/>

2. I currently have **gold** and specifically plan to be used in future to cover my expenses in case of emergency

☐ Yes

☐ No

3. Thinking about the total amount of money or other financial instruments that you have saved or invested currently for EMERGENCY EXPENSES, about how many months of living expenses would this amount cover?

☐ Less than one month

☐ 1 to 2 months

☐ 3 to 6 months

☐ 7 to 9 months

☐ 10 months or more

☐ Don't know

☐ None all above

4. Which individuals might you plan to borrow from if there an emergency in the future?

(Select all that apply)

☐ Family

☐ Friends

☐ Family and friends

☐ None of the above

☐ Nobody at all

SECTION 3: Factors of Emergency Fund Provision Behaviour

Q1. Please indicate your level of agreement with each of the following statements by circling the appropriate number on the scale:

Statements	Strongly Disagree	Strongly Agree
1. For me, having specific emergency fund makes me happy	1	2	3	4	5	6	7	8	9	10	
2. For me, having specific emergency fund is important	1	2	3	4	5	6	7	8	9	10	
3. For me, it is important to choose financial instruments in preparation for an emergency or unexpected expenses	1	2	3	4	5	6	7	8	9	10	
4. For me, preparing for future emergency needs contribute to less financial stress to me	1	2	3	4	5	6	7	8	9	10	
5. For me, carefully choosing financial instruments purposely to cover financial needs during an emergency would be beneficial	1	2	3	4	5	6	7	8	9	10	

Q2. Please indicate your level of agreement with each of the following statements by circling the appropriate number on the scale:

Statements	Completely untrue.....	Completely true
1. My family is the reason for me to have emergency funds in preparation for future emergencies	1	2	3	4	5	6	7	8	9	10	
2. My friends are the reason for me to have emergency funds in preparation for future emergencies	1	2	3	4	5	6	7	8	9	10	
3. My religious is the reason for me to have emergency funds in preparation for future emergencies	1	2	3	4	5	6	7	8	9	10	
4. My Culture is the reason for me to have emergency funds in preparation for future emergencies	1	2	3	4	5	6	7	8	9	10	

Q3. Please indicate your level of agreement with each of the following statements by circling the appropriate number on each scale.

Statements	Strongly Disagree	.....	.....	.....	.....	.....	.....	.....	.....	Strongly Agree
1. I believed, I have the ability to have a specific fund for future emergencies	1	2	3	4	5	6	7	8	9	10
2. I believed, my current income enables me to allocate specific fund for future emergencies	1	2	3	4	5	6	7	8	9	10
3. I believed, new regulation on minimum wages announced by the government encourages me to allocate specific fund for future emergencies	1	2	3	4	5	6	7	8	9	10
4. I believed, new policy on maximum age retirement (60 years old) announces announced by the government encourages me to allocate specific fund for future emergencies	1	2	3	4	5	6	7	8	9	10

3. I like to look to my budget for the next 1-2 months in order to get a better view of my spending for emergency in the future	1	2	3	4	5	6	7	8	9	10
4. It makes me feel better to have my finances planned for emergency needs over the next 1-2 months	1	2	3	4	5	6	7	8	9	10

Q5. Please indicate your level of likeliness with each of the following statements by circling the appropriate number on each scale.

Statements	Extremely Unlikely	.....	.....	.....	.....	.....	.....	.....	.....	.....	Extremely Likely
1. I intend to have a specific fund to cover future emergencies	1	2	3	4	5	6	7	8	9	10	
2. I intend to choose particular financial instruments that I want to use if there are emergency or uncertainty in the future	1	2	3	4	5	6	7	8	9	10	
3. I intend to plan for future emergency needs	1	2	3	4	5	6	7	8	9	10	
4. I intend to make sure I have enough funds for future emergency needs	1	2	3	4	5	6	7	8	9	10	

Section 4: About You

<p>1. University/ institution (e.g., UiTM, USIM, etc) where you are currently studying. If you are not a student, please enter N/A or Alumni of University</p> <input type="text"/>	<p>2. Please indicate where you are living at present (e.g., Melaka, Kelantan, etc)</p> <input type="text"/>
<p>3. Gender</p> <p><input type="radio"/> Male <input type="radio"/> Female</p>	<p>4. Your age</p> <input type="text"/>
<p>5. Level of Education</p> <p><input type="radio"/> No formal education</p> <p><input type="radio"/> Primary school</p> <p><input type="radio"/> Secondary school</p> <p><input type="radio"/> Diploma/Certificate</p> <p><input type="radio"/> Degree</p> <p><input type="radio"/> Postgraduate</p>	<p>6. Educational background</p> <p><input type="radio"/> Business / accounting <input type="radio"/> Sciences</p> <p><input type="radio"/> Other (<i>pleasespecify</i>): <input type="text"/></p>

<p>7. Marital Status</p> <p> <input type="radio"/> Single <input type="radio"/> Married <input type="radio"/> Widow/Widower </p>	<p>8. Job/ Occupation <i>(You may tick more than one answers below)</i> <i>(select all that apply)</i></p> <p> <input type="checkbox"/> Student <input type="checkbox"/> Part time worker, full time student <input type="checkbox"/> Part time student </p>
<p>9. Do you have dependent or independent financial aid? (dependent means that your monthly expenses is sponsored by your family/friends)</p> <p> <input type="radio"/> Dependent <input type="radio"/> Independent </p>	<p>10. Which financial sources that you have and you use to allocate your emergency fund?(e.g,my income, scholarship,etc)</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>

Thank you for taking the time to complete this questionnaire. Your assistance in providing this information is very much appreciated. If you wish to participate in our **lucky Draw** and/or our **future research**, please provide your contact details and select your choice.



If you like to participate in lucky Draw and/or our future research, please provide your contact

Your email address:

Participate in future research: YES () NO ()

Lucky Draw: YES () NO ()

Participate in email interview: YES () NO ()

OR, if you wish to participate in the email/online interview you can just click the link below:

<https://salford.onlinesurveys.ac.uk/onlineinterviewemergencyfund>

APPENDIX 2: INTERVIEW QUESTIONS

Respondent:

Place:

Question 1	What events do you think may require you to access some quick cash?
Question 2	What do you understand by preparing for emergency expenses?
Question 3	Do you have previous experience of facing emergency financial needs? If yes, how did you handle it? If no, how would you plan to handle it in the future?"
Question 4	How do you plan for future emergency financial needs?
Question 5	What do you think are the advantages of preparing for future emergency needs?
Question 6	Could you please indicate examples of financial instruments that you already have, that you plan to use in future to cover your emergency needs?
Question 7	How are you able to prepare your emergency financial needs?
Question 8	How do you usually make decisions about preparing or not preparing for emergency expenses?
Question 9	Thinking about the total amount of money or other financial instruments that you have saved or invested currently for EMERGENCY EXPENSES, about how many months of living expenses would this amount cover?
Question 10	What do you think about the two new government policies towards your preparation for your emergency needs?
Question 11	Which sources of finance did you used to form your emergency fund?

Thank you for your cooperation. Your responses are really appreciated.

APPENDIX 3: SUMMARY OF THE ITEMS BEFORE EFA

CONSTRUCT/ VARIABLE	ITEMS LABEL	ITEMS
Attitude (ATT)	ATT1	For me, having specific emergency fund makes me happy.
	ATT2	For me, having specific emergency fund is important
	ATT3	For me, it is important to choose financial instruments in preparation for an emergency or unexpected expense.
	ATT4	For me, preparing for future emergency needs contribute to less financial stress to me
	ATT5	For me, carefully choosing financial instruments purposely to cover financial needs during an emergency would be beneficial
	ATT6	For me, less preparation for emergency leads to individual borrowing.
	ATT7	For me, less preparation for emergency has no effect on me.
Subjective Norms (SN)	SN1	My family is the reason for me to have emergency funds in preparation for future emergencies.
	SN2	My friends are the reason for me to have emergency funds in preparation for future emergencies.
	SN3	My religious is the reason for me to have emergency funds in preparation for future emergencies.
	SN4	My Culture is the reason for me to have emergency funds in preparation for future emergencies.
Perceived Behaviour Control (PBC)	PBC1	I believed, I have the ability to have a specific fund for future emergencies
	PBC2	I believed, my current income enables me to allocate specific fund for future emergencies

CONSTRUCT/ VARIABLE		ITEMS LABEL	ITEMS
		PBC3	I believed, new regulation on minimum wages announced by the government encourages me to allocate specific fund for future emergencies
		PBC4	I believed, new policy on maximum age retirement (60 years old) announces announced by the government encourages me to allocate specific fund for future emergencies
Propensity to Plan (PTP)	Propensity to Plan (Short Term)	PTPSHORT1	I decide beforehand how my money will be used over the next few days if there are emergencies.
		PTPSHORT2	I consult my budget to see how much money I have left for the next few days and if it is enough to cover my emergency needs
		PTPSHORT3	I like to look to my budget for the next few days in order to get a better view of my spending for emergency in the future
		PTPSHORT4	It makes me feel better to have my finances planned for emergency needs over the next few days
	Propensity to Plan (Long Term)	PTPLong1	I decide beforehand how my money will be used in the next 1-2 months if there are emergencies
		PTPLong2	I consult my budget to see how much money I have left for the next 1-2 months and if is enough to cover my emergency needs
		PTPLong3	I like to look to my budget for the next 1-2 months in order to get a better view of my spending for emergency in the future
		PTPLong4	It makes me feel better to have my finances planned for emergency needs over the next 1-2 months.
Intention (INT)		INT1	I intend to have a specific fund to cover future emergencies.
		INT2	I intend to choose particular financial instruments that I want to use if there are emergency or uncertainty in the future.
		INT3	I intend to plan for future emergency needs.
		INT4	I intend to make sure I have enough funds for future emergency needs.

CONSTRUCT/ VARIABLE	ITEMS LABEL	ITEMS
Emergency Fund Formation Behaviour (EFFB)	EFFB1	I make some savings
	EFFB2	I invest in some financial instruments
	EFFB3	I borrow from some financial sources

APPENDIX 4: SUMMARY OF PREVIOUS STUDIES ON THE METHOD USED FOR DATA COLLECTION

Authors	Theme	Research approaches	Data sources	Context of study
Johnson & Widdows (1985)	Adequacy of emergency fund holdings	Quantitative	Secondary	United States
Hanna & Wang (1995)	Adequacy of emergency fund holdings	Quantitative	Secondary	United States
DeVaney (1995)	Adequacy of emergency fund holdings	Quantitative	Secondary	United States
Chang & Huston (1995)	Adequacy of emergency fund holdings	Quantitative	Secondary	United States
Hong & Kao (1997)	Adequacy of emergency fund holdings	Quantitative	Secondary	United States
Huston & Chang (1997)	Adequacy of emergency fund holdings	Quantitative	Secondary	United States
Chang et al. (1997)	Adequacy of emergency fund holdings	Quantitative	Secondary	United States
Dilworth, Chenoweth, & Engelbrecht, (2000)	Financial planning, financial goal setting, saving behaviour	Qualitative	Primary	United States
Montalto (2002)	Emergency funds holdings	Quantitative	Secondary	United States
Worthington (2004)	Adequacy of emergency fund holdings; capacity and sources	Quantitative	Secondary	Australia
Bi & Montalto (2004)	Adequacy of emergency fund holdings	Quantitative	Secondary	United States
Joo & Grable (2006)	Adequacy of emergency fund	Quantitative	Primary	United States
Rabinovich & Webley (2007)	General saving behaviour	Quantitative	Primary and secondary	Dutch

Rodriguez-Flores & DeVaney (2007)	Adequacy of emergency fund	Quantitative	Secondary	United States
Cho, Fang, & & Hanna (2007)	Emergency saving goal	Quantitative	Secondary	United States
Wheeler-Brooks & Scanlon (2009)	General saving behaviour	Qualitative	Primary	United States
Anong & DeVaney (2010)	Adequacy of emergency fund	Quantitative	Secondary	United States
Tuvelsson & Yu (2011)	Savings behaviour	Quantitative	Primary	Sweden
Sherraden, Peters, Wagner, Guo, & & Clancy (2013)	General saving behaviour	Qualitative	Primary	United States
Anong & Fisher (2013)	Saving habit	Quantitative	Secondary	United States

APPENDIX 5: LIST OF PRIVATE AND PUBLIC UNIVERSITIES IN MALAYSIA

No	Private Universities
1	AIMST University
2	Al-Madinah International University (MEDIU)
3	Asia e University (AeU)
4	Global NXT University
5	International Centre for Education in Islamic Finance (INCEIF)
6	International University Of Malaya Wales (IUMW)
7	INTI International University
8	Malaysia University of Science and Technology (MUST)
9	Malaysian Institute For Supply Chain Innovation (MISI)
10	Management and Science University (MSU)
11	Manipal International University (MIU), Malaysia
12	Multimedia University (MMU), Kampus Cyberjaya
13	Perdana University
14	Putra Business School Graduate School of Management
15	Quest International University
16	Raffles University Iskandar Malaysia
17	Sunway University
18	Taylor's University (Universiti Taylor's)
19	UNITAR International University (UNITAR)
20	Universiti Antarabangsa AlBukhary (AIU)
21	Universiti HELP
22	Universiti Industri Selangor (UNISEL), Kampus Shah Alam

23	Universiti Kuala Lumpur (Institute Of Product Design And Manufacturing (UniKL IPROM)
24	Universiti Kuala Lumpur (UNIKL), Kampus Kota
25	Universiti Metropolitan Asia
26	Universiti Perubatan Antarabangsa (International Medical University) (IMU)
27	Universiti Teknologi Kreatif Limkokwing (LUCT)
28	Universiti Teknologi Petronas (UTP)
29	Universiti Tenaga Nasional (UNITEN), Kampus Putrajaya
30	Universiti Terbuka Malaysia (UNITEM) (Open University Malaysia) (OUM)
31	Universiti Terbuka Wawasan (WOU)
32	Universiti Tun Abdul Razak (UNIRAZAK)
33	Universiti Tunku Abdul Rahman (UTAR), Kampus Kuala Lumpur
34	Universiti UCSI (UCSI University), Kampus Kuala Lumpur
35	University Malaysia Of Computer Science And Engineering
No	Public Universities
1	University of Malaya (UM)
2	Universiti Sains Malaysia (USM)
3	Universiti Kebangsaan Malaysia (UKM)
4	Universiti Putra Malaysia (UPM)
5	Universiti Teknologi Malaysia (UTM)
6	Universiti Islam Antarabangsa Malaysia (UIAM)
7	Universiti Utara Malaysia (UUM)
8	Universiti Malaysia Sabah (UMS)
9	Universiti Malaysia Sarawak (UNIMAS)
10	Universiti Pendidikan Sultan Idris (UPSI)
11	Universiti Sains Islam Malaysia (USIM)
12	Universiti Teknologi MARA (UiTM)

No	Public Universities
13	Universiti Malaysia Terengganu (UMT)
14	Universiti Tun Hussein Onn Malaysia(UTHM)
15	Universiti Teknikal Malaysia Melaka (UTeM)
16	Universiti Malaysia Pahang (UMP)
17	Universiti Malaysia Perlis (UniMAP)
18	Universiti Sultan Zainal Abidin (Dahulu dikenali sebagai UDM)
19	Universiti Malaysia Kelantan (UMK)
20	Universiti Pertahanan Nasional Malaysia (UPNM)

APPENDIX 6: RESEARCH APPROVAL LETTER



College of Arts & Social Sciences
Room 626 Maxwell Building
The Crescent
Salford, M5 4WT
Tel: 0161 295 5876

03 March 2014

Nur Ahuhada Binita Kamarudin
University of Salford

Dear Nur

Re: Ethical Approval Application – CASS130004

I am pleased to inform you that based on the information provided, the Research Ethics Panel have no objections on ethical grounds to your project.

Yours sincerely

Deborah Woodman
On Behalf of CASS Research Ethics Panel

APPENDIX 7: DESCRIPTIVE STATISTICS FOR ALL CONSTRUCTS IN CFA

Constructs	Items	Mean	Std. Deviation
EFFB	EFFB1	6.98	2.361
	EFFB2	4.40	3.080
ATT	ATT1	7.66	2.273
	ATT2	8.81	1.759
	ATT3	7.87	1.939
	ATT4	7.93	2.022
	ATT5	7.91	1.699
SN	SN1	8.42	2.100
	SN2	5.33	2.475
	SN3	6.72	2.486
	SN4	5.58	2.364
PBC	PBC1	7.58	1.752
	PBC2	6.59	2.338
	PBC3	6.50	2.102
	PBC4	6.76	2.097
PTP (Short)	PTPshort2	7.66	1.950
	PTPshort3	7.78	1.931
	PTPshort4	7.87	1.939
PTP (Long term)	PTPLong1	7.33	1.900
	PTPLong2	7.23	2.010
	PTPLong3	7.35	1.939
	PTPLong4	7.59	1.856
INT	INT1	7.92	1.784

Constructs	Items	Mean	Std. Deviation
	INT2	7.31	1.899
	INT3	8.20	1.563
	INT4	8.28	1.628

Note: EFFB (Emergency Fund Formation Behaviour), ATT (Attitude), SN (Subjective Norms), PBC (Perceived Behaviour Control), PTP (Propensity to Plan), INT (Intention)

APPENDIX 8: THE CONTACT LETTER



To whom it may concern

Dear Sir/ Madam,

Request for permission for survey questionnaires distribution and potential recruitment of interviewees for a study on the "Emergency Fund Provision among Young Adults in Malaysia."

I am a full time PhD student in Finance registered at the Salford Business School, University of Salford, Manchester, United Kingdom.

I am conducting online survey questionnaires and online interviews among young adults group in Malaysia. The purpose of the surveys and interviews is exclusively for the academic purpose only. All collected responses and information will be treated anonymously and confidentially. The survey is conducted through online platform. Therefore, I am seeking your permission to share the survey link in your student information system.

I firmly believe that your students' perspective is very much valuable in making significant contribution to this research. A deeper understanding in the perception and financial planning behaviour among young adults in Malaysia is non-trivial given the increasing numbers of young adult individuals who are facing serious financial problems. This study also seeks to contribute to the development and growth of the financial planning sector in Malaysia.

Please do not hesitate to contact me if you require further information. Your assistance and cooperation are highly appreciated. I am looking forward to hearing from you.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Nur Shuhada Binti Kamarudin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Nur Shuhada Binti Kamarudin
PhD Student
Salford Business School
University of Salford
Manchester, United Kingdom.
Email address: n.s.kamarudin@edu.salford.ac.uk
Tel: +44 (0) 07823807796

APPENDIX 9: SURVEY INTERVIEW ANSWERS

TABLE 1		
Question	Responses	Keywords
Q1. What events do you think may require you to access some quick cash? and,	P1: (Q1) <i>“Accident....”</i> (Q2) <i>“help me to manage my money properly”</i>	Accident
	P2: (Q1) <i>“1. Charity programmes 2. Tournaments”</i> (Q2) <i>“it is where we need cash during emergency, such as for medical or help someone who is needy”</i>	Medical, Charity
	P3: (Q1) <i>“Joint as a facilitator at consultant training...”</i> (Q2) <i>“to cover our expenses for medical”</i>	Job, Medical
Q2. What do you understand by preparing for emergency expenses?	P4: (Q1) <i>“Ceremony of someone death, education (student life in university)....”</i> (Q2) <i>“to save others life, make someone smile at their face”</i>	Death, Education, Charity
	P5: (Q1) <i>“reunion or gathering”</i> (Q2) <i>“prepare for unexpected expenses”</i>	Leisure, Unexpected
	P6: (Q1) <i>“Car maintenance, house maintenance, unexpected bills and tolls, fuels for car.”</i> (Q2) <i>“In my case, emergency expenses mean medical Especially for my</i>	Maintenance, Travel, Bills, Medical

TABLE 1		
Question	Responses	Keywords
	wife to deliver baby. Emergency happen when unexpected event happen like car breakdown/need some maintenance (tyre punctured-need for replacement which cause hundreds RM). ”	
	P7: (Q1) “emergency... such as sick” (Q2) “ prepare budget for any case of emergency”	Medical, Budgeting unexpected
	P8: (Q1) “1.charity events 2.university events such as clubs and society” (Q2) “we can use... when there is any emergency.. ,such medical problem”	Charity, Leisure, Medical
	P9: (Q1) “canteen day, food bazaar, fair,... ” (Q2) “we save some money for our future”	Leisure, Saving
	P10: (Q1) “1.Urgency operation (children or myself) 2. Parents operations or emergency hospitalization 3. House on fire 4. Robbing 5. Loosing cars (need new cars) 6. Friends or Family need some money for education 7. Urgent outstation 8. Sudden family member or relatives pass-away” (Q2) “somebody need money (want to borrow), urgent holiday/vacation (need to go overseas meeting, living expenses after get slash from job, we have big family. ”	Medical, Unexpected accidents, Education, Death, Charity, Travel, Unemployed (job loss)

TABLE 2		
Question	Responses	Keywords
What do you think are the advantages of preparing for future emergency needs?	P1: <i>“help me to ease my financial burden”</i>	Less financial burden
	P2: <i>“1. No stress, 2. Healthy lifestyle”</i>	Avoid stress and contribute to healthier life
	P3: <i>“can cover our financial during emergency”</i>	Manage the financial need during emergency
	P4: <i>“can be prepare at all time, and no need to beg/rely on the others”</i>	Be prepared and independent during emergency
	P5: <i>“we will have enough money when needed and will not cause trouble to others”</i>	Independent during emergency
	P6: <i>“Advantages will help you to not stress during that critical event. And it will help you and your family. It is part of your financial security. need savings and asset”</i>	Avoid stress if there emergency
	P7: <i>“The advantage is it motivates to save more and more money....”</i>	Motivation to save more money
	P8: <i>“1. Less stress 2.Reduce our headache”</i>	Reduce stress
	P9: <i>“we will not panic when facing the problem when we need to use money”</i>	Be prepared for emergency
	P10: <i>“1. Helps my family (sisters, mom...) 2. Help to prepare for future family development (try to avoid problems if Allah Bless) ”</i>	Avoid problem in future

TABLE 3		
Question	Responses	Keywords
How are you able to prepare your emergency financial needs?	P1: <i>“has to project the needs for the future or in other words, has own plan ”</i>	Planning
	P2: <i>“it can be archive if plan...”</i>	Planning
	P3: <i>“depends on how you manage your money”</i>	Manage/ planning
	P4: <i>“support from family and friends”</i>	Family and friends
	P5: <i>“Success to prepare when there is an emergency that need us to spend some money, then the money is there for us.. ”</i>	planning
	P6: <i>“It depends on how I spend my income and manage the financial and control them. Save 5% from income, reduce 1% expenses or increase 1% income..”</i>	Manage/planning
	P7: <i>“make sure I have discipline towards saving the money in the financial instrument”</i>	Planning/ discipline
	P8: <i>“by motivating yourself”</i>	Motivation/intention
	P9: <i>“we have to know what we need and what unneeded”</i>	Understand the priority
	P10: <i>“make sure have more left in account before next salary... ”</i>	Planning/consult budget

TABLE 4		
Question	Responses	Keywords
What do you think about the two new government policies towards your preparation for your emergency needs?	P1: <i>“it a good policy....but no effect to me... ”</i>	Indifferent
	P2: <i>“I don’t feel itz ok.. ”</i>	Negative
	P3: <i>“no comment”</i>	Indifferent
	P4: <i>“Don’t know”</i>	Indifferent
	P5: <i>“There will be some advantages to me because I can work more to save my money... ”</i>	Positive
	P6: <i>“No idea...never relate to this at all.. the most important to know your expenses and control them.. ”</i>	Indifferent
	P7: <i>“the government policies doesn’t worry me to save money ”</i>	Indifferent
	P8: <i>“I don’t know, sorry”</i>	Indifferent
	P9: <i>“no idea/....”</i>	Indifferent
	P10: <i>“Minimum wages help...but retirement not good... ”</i>	Positive and negative

TABLE 5		
Question	Responses	Keywords
<p>Q1. How do you plan for future emergency financial needs?</p> <p>Q2. How do you usually make decisions about preparing or not preparing for emergency expenses?</p>	<p>P1: (Q1) <i>"Put money in savings account"</i> (Q2) <i>"by looking at previous expenses experience"</i></p>	<p>Savings, No specific time</p>
	<p>P2: (Q1) <i>"Savings.. spend money wisely"</i> (Q2): <i>"I prepare through the expenses I have"</i></p>	<p>Savings, plan</p>
	<p>P3: (Q1) <i>"Make sure 10% from my income every month I save it for my emergency expenses"</i> (Q2) <i>"10% from my income"</i></p>	<p>Savings Monthly</p>
	<p>P4: (Q1) <i>"Make some investment at anything that will give benefit to me. also can invest at ASN¹(Amanah Saham Nasional) for Malaysian, for long term"</i> (Q2) <i>"make a comparison, the benefit of emergency fund in future"</i></p>	<p>Investments, No specific time</p>
	<p>P5: (Q1) <i>"... Save money every month"</i> (Q2) <i>"Usually make the decision to make sure the money not going low"</i></p>	<p>Savings, Monthly</p>
	<p>P6: (Q1) <i>"write some list for any possibility for emergency events..."</i> (Q2) <i>"based on experience and advice"</i></p>	<p>Planed a head based on experience, No specific time</p>

TABLE 5		
Question	Responses	Keywords
	<i>by parents”</i>	
	P7: (Q3) <i>“I invest RM 100 in ASB² every months”</i> (Q4) <i>“I will prevent to forget allocate money for emergency...I will separate the money I had into two accounts, one is for the daily expense and second is for emergency”</i>	Investments, Monthly
	P8: (Q3) <i>“Saving money from beginning”</i> (Q4) <i>“Wisely think how much I need”</i>	Savings, No specific time
	P9: (Q3) <i>“I put a little amount of money at the place that I not ever thought to use, such as under pillow, under mat and etc...”</i> (Q4) <i>“Always. Monthly”</i>	Informal Savings, Monthly
	P10: (Q3) <i>“saving aside salary...Monthly savings in children accounts..”</i> (Q4) <i>“Every months”</i>	Savings, Monthly

Note:¹ASN above was mentioned to Amanah Saham Nasional Berhad (ASNB), a wholly-owned subsidiary of Permodalan Nasional Berhad (PNB), was established to manage unit trust funds launched by PNB in Malaysia.

²PNB has launched eleven other unit trust funds, namely Skim Amanah Saham Bumiputera (ASB)

TABLE 6		
Question	Responses	Keywords
Thinking about the total amount of money or other financial instruments that you have saved or invested currently for emergency expenses, about how many months of living expenses would this amount cover?	P1: “not know....”	Undefined
	P2: “do not know...”	Undefined
	P3: “no idea.. I do not know...”	Undefined
	P4: “may be three or four months..I think it enough for me...”	Adequate
	P5: “do no...”	Undefined
	P6: “No idea ...”	Undefined
	P7: “Less than one month..”	Not adequate
	P8: “em..Difficult question, sometimes over spending..but I feel..may be one months only..”	Not Adequate
	P9: “I do no.. never think about it.”	Undefined
	P10: “four to six months.. probably because I had saving in insurance based also...”	Adequate

TABLE 7			
Question	Responses	Keywords	Adequacy level
Do you have previous experience of facing emergency financial needs? If yes, how did you handle it? If no, how would you plan to handle it in the future?”	P1: “No, I will have my own savings purpose just for an emergency cases”	Savings	Undefined
	P2: “Yes, I handle it easily coz I had some savings in my account”	Savings	Undefined
	P3: “No, I will manage it wisely”	Plan to manage the emergency	Undefined
	P4: “Yes, Alhamdulillah I still have family to support me when I truly need also friends that lend me some money to survive, especially as university’s student that	Family, Friends, Borrowing	Adequate

	<i>far away from my lovely hometown”</i>		
	P5: <i>“Yes, I borrow from my friends ”</i>	Friends, Borrowing	Undefined
	P6: <i>“Recent experiences, tyre punctured and need for replacement. Cause hundreds RM. Use current account...credit card and pay for the next month salary. important to choose low interest credit card for late payment. For future, need to put into list of emergency expenses”</i>	Current account, Credit card	Undefined
	P7: <i>“Yes, I do have, when I had to settle my debt with UNITEN (university), I am grateful, I deposited the money in Amanah Saham Bumiputra, the money that I deposited is sufficient enough to pay the debt ”</i>	Investment in unit trust	Not adequate
	P8: <i>“Yes, Im going through it now. I really need to pay my exam fee for next semester since it is not covered by my loan..thus I have to find part time job to make savings ”</i>	Part time Job, Savings in future	Not Adequate
	P9: <i>“Yes, Once facing with the emergencies financial needs. I handle it with calm as I am, then I find my trusted and</i>	Family	Undefined

	<i>nearest person to me.the person I always find when needed is my parents.”</i>		
	<i>P10: “Yes, borrow from my sisters two time or may be more,. Check for savings to make sure enough for emergency...take insurance with saving scheme, insyaAllah helps me in emergency.</i>	Family, savings, Insurance	Adequate

Note: Table 7, with reference to Table 6 summarises the answers from the participants regarding their emergency experience.

TABLE 8		
Question	Responses	Keywords
Which sources of finance did you used to form your emergency fund?	P1: <i>“Student loan”</i>	Student loan
	P2: <i>“PTPTN”</i>	Student loan
	P3: <i>“Student loan....income unit trust”</i>	Student loan and income
	P4: <i>“Loan from PTPTN”</i>	Student loan
	P5: <i>“family and scholarship”</i>	Income from family and scholarship
	P6: <i>“Monthly income...”</i>	Income
	P7: <i>“my scholarship ”</i>	Scholarship
	P8: <i>“from the scholarship”</i>	Scholarship

TABLE 8		
Question	Responses	Keywords
	P9: <i>“Loan from PTPTN”</i>	Student loan
	P10: <i>“My income”</i>	Income

TABLE 9		
Question	Responses	Keywords
Could you please indicate examples of financial instruments that you already have, that you plan to use in future to cover your emergency needs?	P1: <i>“Savings accounts, fixed deposit, gold”</i>	Saving account, fixed deposit, gold
	P2: <i>“savings account”</i>	Saving account
	P3: <i>“Unit trust, gold”</i>	Mutual fund, gold
	P4: <i>“Saving account”</i>	Saving account
	P5: <i>“bank saving”</i>	Saving account
	P6: <i>“ASB, saving account”</i>	Mutual fund, saving account
	P7: <i>“Amanah Saham Bumiputra ”</i>	Mutual fund
	P8: <i>“Savings account”</i>	Saving account
	P9: <i>“Savings account..and gold”</i>	Saving account, gold
	P10: <i>“Current account..land investment, investments profit from insurance”</i>	Current account, Land, insurance based profit

TABLE 10		
Question	Responses	Keywords
Could you please indicate examples of financial instruments that you already have, that you plan to use in future to cover your emergency needs?	P1: <i>“Savings accounts, fixed deposit, gold”</i>	Intermediate fund
	P2: <i>“savings account”</i>	Quick fund
	P3: <i>“Unit trust, gold”</i>	Comprehensive fund
	P4: <i>“Saving account”</i>	Quick fund
	P5: <i>“Saving accounts and current account”</i>	Quick fund
	P6: <i>“ASB, saving account”</i>	Comprehensive fund
	P7: <i>“Amanah Saham Bumiputra ”</i>	Comprehensive fund
	P8: <i>“Savings account”</i>	Quick fund
	P9: <i>“Savings account..and gold”</i>	Intermediate fund
	P10: <i>“Current account..land investment, investments profit from insurance”</i>	Comprehensive fund

Table 10 extends Table 9 for the survey interview results on the categories of financial instruments.